NZCTU
Te Kauae Kaimahi

Submission to the Ministry of Business, Innovation and Employment:

Seeking your feedback on work with engineered stone and materials containing crystalline silica

Submitted by the New Zealand Council of Trade Unions Te Kauae Kaimahi

17 March 2025

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This submission is made on behalf of the 31 unions affiliated to the New Zealand Council of Trade Unions Te Kauae Kaimahi (NZCTU). With over 340,000 union members, the NZCTU is one of the largest democratic organisations in New Zealand.

The NZCTU acknowledges Te Tiriti o Waitangi as the founding document of Aotearoa New Zealand and formally acknowledges this through Te Rūnanga o Ngā Kaimahi Māori o Aotearoa (Te Rūnanga), the Māori arm of Te Kauae Kaimahi (NZCTU), which represents approximately 60,000 Māori workers.

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1. Introduction

1.1. This submission is made on behalf of the unions affiliated to the New Zealand Council of Trade Unions Te Kauae Kaimahi (NZCTU). With over 340,000 members, the NZCTU is one of the largest democratic organisations in New Zealand.

1.2. The NZCTU remains strongly committed to banning engineered stone in New Zealand and implementing better occupational health protections for all workers working with silica-containing materials.

1.3. The Minister for Workplace Relations and Safety has stated that "*It is important that we use an evidence-based approach and consider a range of regulatory tools to tackle this issue in a New Zealand context*." All material evidence finds that processing engineered stone is extremely harmful to health. It also shows that, despite awareness of its harmful effect on health, lower-level interventions are incapable of driving the behavioural change necessary to adequately address the issue.

1.4. If we really are to be evidence led, the only sufficient option is to ban engineered stone.

1.5. Engineered stone is not an essential building product; it is a cosmetic choice and many safe alternatives exist. We can protect workers from life-altering illness by banning this material.

1.6. Therefore, we recommend that the Government introduces a total ban on the importation, manufacture, process, and supply of any products containing any amount of engineered stone above 1%.

1.7. Existing legacy engineered stone products will also require strong and effective regulation and education to ensure minimal exposure when work is undertaken to remove or modify it. Handling, transport and other activity associated with safely managing and removing legacy engineered stone (engineered stone currently in situ) should be the only exemption to the full ban.

1.8. There is a need for stronger controls implemented for all work involving silica material. Having general duties for all work with RCS exposure hazards will provide certainty and clarify what measures are needed to keep workers safe. Ensuring proper exposure and health monitoring (with effective worker participation, engagement and representation practices) will maintain good practice and confirm that control measures continue to provide the best protection for workers.

1.9. We also recommend the establishment of a robust and tripartite licensing regime for work that involves high-risk silica and working with legacy engineered stone. And the introduction of a national lung disease registry for exposed workers, to ensure they are effectively supported, including through access to healthcare and advanced screening.

2. Background

2.1. Silica is a natural substance which is commonly found in many materials such as concrete, bricks, sand, and stone. When materials that contain silica are cut, ground, polished or otherwise disturbed they release dust (respirable crystalline silica or 'RCS').

2.2. RCS dust exposure is extremely hazardous to human health. Occupational and environmental, and respiratory physicians outline that "*Once airborne, RCS is small enough to be inhaled deep into the lungs and in susceptible individuals causes lung disease such as silicosis and lung cancer and in others, kidney disease and autoimmune disease*".[1]

2.3. These diseases are not curable; however, they are preventable.

2.4. Engineered stone is an artificial product made by combining crushed stone materials with chemicals and resins to produce a hard surface. It is a popular product for the use in kitchens as benchtops.

2.5. Demand for this product is increasing due to it being relatively cheap and easy to process. It is also likely that this growth can be attributed to the wider public not being aware of the serious health risks to workers from the product and the lack of Government action in dealing with it. Parallels could be drawn to the increase in demand for asbestos products during the 1950s and 1960s.

2.6. There is now a better understanding of the material science of engineered stone. Growing scientific evidence indicates that engineered stone has properties that pose significant risks to human health when it is cut, ground, or polished:

- The crystalline silica content in engineered stone can be more than 90%, which is much higher than natural stone. Processing such products generates much higher levels of RCS. Although we note that any level of RCS exposure is dangerous for human health.

[1] Dr Alexandra Muthu & DR Adrienne Edwards 'Beautiful benchtops: How should we protect our works?' 4 March 2025

- Processing engineered stone materials produces higher levels of ultrafine particles than other silica-containing products such as concrete. Engineered stone particles in this size range are more easily able to penetrate deep into the lungs, causing inflammatory responses and other health effects such as autoimmune disease.

2.7. There is also growing understanding of the specific risks that are attributable to the properties of engineered stone. Some of these risks are outlined in a literature review commissioned by SafeWork Australia,[2] and a literature review commissioned by MBIE.[3]

- Engineered stone can be processed more easily than natural stone, requiring less labour input.[4]

- 'There is also evidence that the dust generated from engineered stone differs in terms of the forms of crystalline silica present, surface characteristics, resin and elemental composition, and particle size distribution, all of which may influence its reactivity [in the lungs]".

- "The presence of resin in engineered stone may influence the risk associated with RCS exposure by coating the reactive surface groups of RCS particles, affecting how the body responds to the inhaled RCS".

- "The presence of other, potentially reactive elements in engineered stone dust emissions as well as lung biopsies of silicotic patients, suggests the potential contribution of metal ions in engineered stone to disease risk".

2.8. There are also several system- and industry-specific factors that have created untenable levels of risk in work involving engineered stone.

2.8.1. There is a marked history of non-compliance and failure to improve conditions within the engineered stone industry. Even with increased regulator action through inspections and improve notices, businesses are still failing to meet basic safety standards. This means workers in this industry will be subject to ongoing exposure at levels well over the Worker Exposure Standards (WES).

[2] Safe Work Australia, *Decision Regulation Impact Statement: Prohibition on the use of engineered stone* (August 2023), at [2.2.1].
[3] Centre for Public Health Research, Massey University, Wellington, *Review of scientific evidence relating to the risks of working with engineered stone* (December 2024).
[4] SafeWork Australia, *Decision Regulation Impact Statement: Prohibition on the use of engineered stone* (August 2023), At page 6.

2.8.2. The nature of the improvement notices served by WorkSafe indicates that the issues do not only relate to safe engineered stone processing practices, but health and safety practices more broadly. For instance, prohibition notices have been issued for PCBU's failing to have guarding on tools, and improvement notices have been issued for fit testing respiratory equipment. WorkSafe notes that best practice is inconsistent across the industry, even in businesses that are "better performing".

2.8.3. As noted by MBIE, the engineered stone industry is comprised of a high proportion of small businesses with relatively high business turnover; this mirrors the structure of the industry in Australia. The Australian engineered stone industry relied heavily on migrant workers, and this is likely also the case in New Zealand. It is well established that workers in small businesses are less likely to raise concerns about health and safety practices. A range of factors contribute to this, including:

- Higher exposure to the inherent power imbalance between employer and worker.
- Lower rates of unionisation in small businesses, which means workers miss out on the improved safety that unionised workplaces are shown to bring to workplaces.
- The relative precarity of work in small businesses, and the related fear of repercussion for raising issues of health and safety.
- Small businesses are less likely to have mechanisms in place for workers to raise health and safety issues.

2.8.4. In addition, we note that although WorkSafe have previously undertaken some significant work through the engineered stone sector, there has since been significant cuts to the capacity and capability of WorkSafe. Significant cuts have been made to WorkSafe's capacity to proactively regulate exposure to occupational health hazards WorkSafe will therefore struggle to enforce anything less than a full ban.

2.9. Finally, we note that there is no scientific evidence that supports any notion of a "safe" threshold of crystalline silica content in engineered stone.

2.10. When considering the cumulative effects of all these different factors, the status quo is not a tenable option and should be put forward as a serious option for consultation. More

workers will continue to be seriously harmed and killed if engineered stone products remain on the market.

3. Following the Australian lead

3.1. On 1 July 2024 Australia led the world by becoming the first country to ban engineered stone. This decision was made on broad consultation, extensive review of scientific research, and learning from experience.

3.2. Moving to ban engineered stone also followed previous work in Australia which attempted to improve health and safety through increased regulatory and compliance settings. Their experience was such that those actions did not adequately address the issue, and stronger action was still required through the form of a total ban.

3.3. SafeWork Australia (the Australian federal health and safety body) found that due to the increased risks posed by RCS from engineered stone, the increased rate of silicosis diagnosis amongst engineered stone workers, and the faster and more severe disease progression amongst this group, combined with a multi-faceted failure of this industry to comply with the model WHS laws, meant that continued work with engineered stone posed an unacceptable risk to workers, and that the use of all engineered stone should be prohibited.

3.4. A 2021 Australian National Dust Disease Taskforce report found nearly one in four workers exposed to silica dust from engineered stone before 2018 have been diagnosed with silicosis.[5] These findings are supported by a large-scale health screening programme in Victoria, Australia, which found an extremely high prevalence of silicosis among hundreds of workers who worked in the engineered stone industry.[6]

3.5. Thus, while we do not currently have much data on the occupational illness rates of New Zealand engineered stone workers, we have an ample body of evidence assembled by Australian authorities and specialists. There is no valid reason to believe that these findings do not translate to New Zealand. Furthermore, it would be highly irresponsible to wait for more New Zealand specific data on this issue, as we know from the Australian

[5] National Dust Disease Taskforce – Final Report to Minister for health and aged care.
[6] Hoy et al., "Prevalence and risk factors for silicosis among a large cohort of stone benchtop industry workers", *Occupational and Environmental Medicine* 80 (2023).

experience that this will mean more workers harmed and killed through ongoing and unnecessary exposures.

3.6. Data that is collected in New Zealand shows that Māori are disproportionately exposed to workplace hazards compared to non-Māori.[7] As Muthu and Edwards outline, "*This contributes to health inequalities which makes it a priority that workers have access to on-the-job occupational health input, health monitoring and access to health care. It is a priority that we ensure workers have improved work conditions, optimal occupational health monitoring and access to health care*".[8]

3.7. The Australian decision was a precautionary action, with SafeWork Australia noting this was a necessary policy directive to save workers' lives:

"At *present an unknown number of Australian workers will go on to develop silicosis because of their prior exposure to RCS from working with engineered stone. The only way to ensure that another generation of Australian workers do not contract silicosis from such work is to prohibit its use, regardless of its silica content. The cost to industry, while real and relevant, cannot outweigh the significant costs to Australian workers, their families and the broader community that result from exposure to RCS from engineered stone.*"

3.8. Australia also recognised that a ban was only one part of the action required. The full suite of changes implemented in Australia included:

- A full ban on engineered stone products which saw their laws amended to require that PCBUs must not carry out, or direct or allow a worker to carry out, work that involves the manufacture, supply, processing, or installation of engineered stone benchtops, panels and slabs.
- Improved controls for work involving "legacy stone" (engineered stone already in situ). This includes a requirement that any repairs, removal or modifications, or disposal of engineered stone requires notification to the regulator.
- Strengthening protections for workers working with any other (non-engineered stone) materials containing silica by requiring:
    - Controlled processing of all crystalline silica substances.

[7] Denison HJ, Eng A, Barnes LA, et al Inequities in exposure to occupational risk factors between Māori and non- Māori workers in Aotearoa New Zealand. J Epidemiol Community Health, 2018;72(9):809-816. https://jech.bmj.com/content/72/9/809
[8] Dr Alexandra Muthu & DR Adrienne Edwards 'Beautiful benchtops: How should we protect our works?' 4 March 2025

- Assessing the risk of work involving the processing of crystalline silica substance; and
- Additional duties for high-risk materials, including preparing a silica risk control plan.

4. Recommendations

4.1. The NZCTU strongly supports a total ban on engineered stone products. 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.

Implement a total ban

4.2. A full ban on the import, supply and use of engineered stone will eliminate the hazard of exposure to engineered stone RCS for people working with this material. Our position on implementing a total ban on engineered stone products is based on the following:

- **Severity of the harm caused by engineered stone.** Evidence from Australia indicates that stonemasons working with engineered stone are 10 times more likely to contract silicosis, and that 1 in 4 workers exposed from their work with engineered stone had already been diagnosed with silicosis. On these numbers, there are an estimated 150–250 New Zealand workers who are likely to have silicosis.

- **Dust emissions from engineered stone are materially different.** As outlined above, available research shows that the type of dust produced from processing engineered stone differs from that produced from processing natural stone, that the exposures are larger due to the ability to process the material more rapidly, and that exposures from engineered stone dust often contain a much larger concentration of RCS.

- **A history of non-compliance in the sector.** Regulator oversight to date indicates that increased duties or requirements on businesses are not enough to adequately change behaviour, with ongoing non-compliance resulting in workers continuing to be exposed. Compounding this concern, there have been significant cuts to WorkSafe's budget and personnel, which will severely limit its ability to regulate and enforce any new requirements. We understand that there is now a much-limited

occupational health support capacity within WorkSafe to support the inspectorate. A total ban will therefore be much more efficient to enforce.

- **Engineered stone is a fashion product.** Simply put, engineered stone is not an essential construction material and there are suitable alternative materials available.

- **Nature of the industry in New Zealand.** Like Australia, the engineered stone industry is comprised of many small businesses, which often lack health and safety capacity. Without significant investment in WorkSafe's capacity, increasing regulatory requirements on these businesses is unlikely to change behaviour. Workers in the engineered stone industry are also less likely to be unionised, which means there is less support available to them to engage in proper health and safety processes, receive proper training, or have access to information about the dangers of this work.

- **Ongoing impact on vulnerable workers globally.** Continuing to import engineered stone also supports the maintenance of an international market for this dangerous product. We are aware that many engineered stone products are manufactured in countries with low labour standards and protections for workers. It is not only workers in New Zealand who suffer from exposure due to the ongoing use of this product.

Other action still required

Protection for work around legacy engineered stone

4.3. Improved protections are also necessary to protect workers working with legacy engineered stone. This will require establishing stricter requirements for the processing, handling and movement of engineered stone products that are currently in situ.

Licensing

4.4. We would also like to see a robust and tripartite licencing regime introduced for any business that works with engineered stone. This would ensure that fit and proper PCBUs 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. This licencing regime would also be a primary way of ensuring work with legacy stone is done safely.

More protection for all work involving silica

4.5. Significant risks exist from all forms of work with respirable silica-containing material. We want to see more done to protect all workers from the hazards of RCS dust exposure. To this end, we would like to see increased protections for workers, similar to those introduced in Australia requiring better risk assessment, controls, and plans for work involving silica.

Dust exposure registry

4.6. We also support calls from the wider industry to also introduce an official registry of exposed workers (such as that introduced in Australia) to help with tracking of exposure, and long-term monitoring for workers to ensure they receive the necessary support. This will also support capacity within New Zealand for research on disease progression.

Review of worker exposure standards

4.7. Currently, the worker exposure standards are not mandatory to meet, which can result in poor safety practices and unfit control measures. Giving exposure standards regulatory standing will provide clarity to workers and businesses that all reasonably practicable measures must be taken to keep workers safe from exposures and will give the regulator the teeth needed to enforce these standards.

Education and awareness

4.8. Finally, we believe that further education about the dangers of engineered stone and exposure to dust in the workplace needs to be provided to raise awareness of the issue. Awareness needs to be significantly increased among both the workforce that has worked, or is currently working, with the material, and the wider public. Steady growth in the market of engineered stone products suggests that the serious risks to health are not widely known. The continued lack of compliance throughout the industry also indicates that there is a knowledge gap of the risks involved.

4.9. With the proliferation of engineered stone benchtops in New Zealand, workers must be aware of the risks before undertaking work and must be informed about how to safely manage the risks.

Partial ban not appropriate

4.10. We do not support a partial ban of engineered stone products based on the percentage of silica present. There is no evidence that standards compliance would increase based on the material having a lower percentage of silica. We also have serious concerns that lower percentage silica engineered stone would provide a false reassurance to workers and businesses that the material is safe, and this would negatively affect compliance. This is not acceptable.

4.11. We also point to the SafeWork Australia RIS, which outlines their opposition to a partial ban (allowing lower silica content engineered stone). This is on the basis that there is "*no evidence that lower silica engineered stone poses less risk to worker health and safety than higher silica engineered stone. There is no toxicological evidence for a 'safe' threshold of crystalline silica content, or that the other components of lower silica engineered stone products ... do not pose additional risks to worker health.*" [9]

5. Comments on the MBIE consultation

5.1. We would also like to raise several concerns regarding how the options put forward in this consultation have been framed.

5.2. The consultation presents the options in a way that implicitly favours a regulatory response that would enable the continued production of engineered stone in New Zealand. For instance, "Diagram 2 – Overview of options presented in this discussion document for consultation" does not provide a neutral assessment of the options. First, the choice of the two axes "flexibility" and "level of intervention" are effectively synonymous. It would be more accurate to categorize the y axis as flexibility and the x axis as level of protection for workers. Second, the graph uses a colour scale which is weighted against options that will provide the greatest protections for workers'. Presenting the options on a colour scale, ranging from blue (no change) to red (total ban) heavily implies that options at the low end of "level of intervention" are preferable.

5.3. We also do not think that the criteria used in assessing the options put forward by MBIE are appropriately set, and that this has resulted in certain options being incorrectly presented as more effective or appropriate. This is illustrated by the analysis presented

[9] At 56.

in "Table 1 – Multi-criteria analysis of options presented in this discussion document". This table does not provide any indication of how different criteria are weighed against each other and criteria are inconsistently applied to different options (see the appendix to this submission for further discussion).

5.4. Finally, we note that the MBIE commissioned literature review is dated 11 December 2024, which was seven days before this consultation went live. However, this literature review was not made publicly available until 10 March 2025, just five working days before the consultation closed, which did not provide adequate time for submitters to consider the implications of this research summary.

6. Conclusion

6.1. Australia has set out the path forward for reducing the harm caused by RCS dust from engineered stone and other silica-containing materials. There is no compelling evidence that the New Zealand engineered stone industry is materially different to the Australian engineered stone industry. Nor is there any reason to believe that New Zealand workers working with engineered stone are at any less risk than Australian workers working with engineered stone.

6.2. We have an opportunity to learn from the Australian experience by implementing a full ban of engineered stone products and developing accompanying regulation to ensure the safe handling of legacy stone. The Australian experience has also established the need to enhance protection for all work involving silica materials, and for better awareness of, and support for, workers regarding occupational health and workplace exposures.

6.3. We must take decisive action now, rather than wait for more workers to be harmed before the Government discovers that stronger action is required.

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7. Appendix: NZCTU comment on Options Criteria and Table 1 – Multi-criteria analysis of options presented in this discussion document.

NZCTU comments have been added to the table in orange

Criterion	**Option 1 No change**	**Option 2: Specific mandatory engineered stone requirements**	**Option 3: Licensing of workplaces**	**Option 4: General duties (4A) and Mandatory monitoring of worker health (4B) and/or exposure (4C)**	**Option 5: Limiting supply or use of engineered stone through a full ban (5A) or partial ban (5B) on engineered stone**
Effective *"Options will reduce harm arising from work and prevent regulatory failure"*	0 In cases where businesses follow best practice it is effective. However, evidence suggests this is not always the case.	+ + Enforcing more stringent regulations will force businesses acting in bad faith to comply or exit the affected industries.	+ Focuses compliance burden on engineered stone PCBUs and allows monitoring by, and closer relationship with the regulator	+ 4A: Introducing a general duty is expected to be an effective tool. 4B+4C: Health or exposure monitoring as a stand-alone option will not prevent harm from occurring. However, monitoring could be used to support mandatory requirements as it provides useful information to determine whether those are working effectively	+ + 5A: A total ban would remove risk regarding new imports but may still require additional measures for product already in the country "legacy products". 5B: A partial ban may still require additional measures as lower crystalline silica products may or may not be safer than high crystalline silica products.

	Under no circumstances is the status quo a tenable option. The status quo should be removed as an option from the options analysis.	Given the current restraints on WorkSafe's capacity, it is difficult to see where the stringent enforcement capacity will come from. We understand that WorkSafe is now left with only one person providing occupational health policy and subject matter support to inspectors.	Effectiveness of licensing workplaces will be better served in a tripartite oversight arrangement.	We believe this to be an effective tool in relation to work with non-engineered stone silica materials. Health and exposure monitoring will support best practice but will not provide effective protection for workers on their own.	
Proportionate *"Options are proportionate to the risk and will target key risks"*	0 Because there are businesses that do not follow best practice and take measures as required under the HSW Act, the current regulatory settings are not proportionate to the risks.	+ + The current measures are not considered to be enough, therefore increasing mandatory requirements would be proportionate to the level of risk.	0 May be required to support other options e.g. a partial ban	++ 4A: A general duty would encompass all industries and is proportionate to the level of risk. 4B: proportionate where workers are engaged in high-risk activities. 4C: more information is required to inform an assessment.	- A total or partial ban would target all engineered stone businesses regardless of risk level. We require more information as to whether it could be considered proportionate to the level of risk when other measures could be taken.
		Given the residual risk, and difficulty in enforcing compliance and ensuring all workers and businesses are sufficiently educated	Overall, the criterion "proportionate" is inconsistently applied across the different options. For example, it is difficult to understand why	4B and C alone are likely to simply push the risks further onto workers – leaving it up to workers to deal with the	The risks posed by engineered stone are created primarily in the cutting and polishing stage of the product. Thus, any business involved in

		on the issue, we do not consider this option to be proportionate to the risks of engineered stone.	"licensing of workplaces" is scores the same as the status quo when it comes to proportionality, whereas "specific mandatory engineered stone requirements" score high on proportionality. No further analysis is provided by MBIE on why this judgement has been made.	consequences of engineered stone.	manufacturing or installing engineered stone is involved in creating the risk to worker health – it doesn't matter where the business is situated in the supply chain. The above comment notwithstanding, we do not see how MBIE can rate this option as a (-) on proportionality while explicitly stating that more information is needed "as to whether it could be considered proportionate to the level of risk".
Clear "*Options are logical, consistent, and easy to understand, provide sufficient certainty to*	0 WorkSafe and NZESAG have received good feedback from industry on the guidance and good practice guide currently developed.	+ Regulations and appropriate guidance are clear and enforceable. We would expect a period of time is required to fully comply where businesses are not already doing so.	+ Sets clear requirements for PCBUs to meet. Would support other proposed duties.	+ 4A: A general duty would be clear. 4B + 4C: Requirements are clear and would be prescriptive where necessary. 4C: More information is required to understand how easy compliance will be.	+ A ban would be clear, a full ban (5A) would be easier to comply with than a partial ban (5B).

support the duty holders to comply and the regulator to enforce, and provide assurance for workers of protection of their H&S"	Can't comment on whether feedback noted is good. We would be interested in understanding if this feedback is just from PCBUs (or business owners) or from the workforce. This is also hard to track against the real evidence relating to the WorkSafe inspections and lack of adherence to control measures as stated in this consultation.	If some businesses are still not complying after increased regulator presence, as is currently the case, we struggle to see why a significant culture change can be expected under these options. Generous assumptions are being made here about the clarity of guidance and regulation developed. Arguably, the current requirements and controls are clear, yet many businesses are not implementing them. The impact of ongoing cuts to capacity within the regulator (who will be charged with writing guidance, supporting industry, and enforcing the regs) is also a major concern here.			A full ban is by far the clearest option. There is no room for interpretation and both businesses and workers alike will know what the requirements are – that it is illegal to produce and install engineered stone products. This option should therefore be rated (++).
Cost-efficient *"Options will minimise compliance and transitional costs for the duty holders and for the regulator, for*	0 Due to inconsistent practices, there is not a level playing field in the costs being met by businesses and consumers to ensure healthy and safe working conditions.	0 It is assumed most businesses should be following best practice and therefore already absorbing costs. Mandatory requirements may add costs for businesses not following food practice.	- Expensive and resource intensive for regulator. A full cost benefit would need to be completed separately from the other options	0 4A: Similar to option 2, no to minimal cost increase is expected from this option. 4B + 4C: Costs may be high and disproportionally so for smaller businesses for health and exposure monitoring. However, more information is required to inform this assumption.	- - A total or partial ban would have negative financial implications for businesses and workers. May create additional costs for businesses working with product already imported.

the benefits they deliver"	It is important to understand how criteria are weighed against one another in this analysis. For example, while it is desirable to find solutions that are both maximally effective and maximally cost-efficient, most regulatory problems in reality require a trade-off between these two. In this case, one of the trade-offs is between worker health on the one hand and the regulatory costs borne by businesses on the other hand. Worker health must carry a far greater weight in determining the final, optimal option.	Without significant culture change and uptake, the costs of engineered stone to workers' health and lives will continue to increase (on projections that the sector continues to increase).	This logic must apply to any option put forward that involves regulator presence, especially under the current capacity constraints		MBIE fails to consider the human and financial costs from death and illness attributable to engineered stone, and the growth in these numbers in the future if no ban is enforced (even in a strongly regulated environment). These costs are left for workers and the health system to bear. Also, this option ensures less regulatory/ compliance costs, as this process becomes much more streamlined under a full ban. Additionally, the costs will lessen over time as the ban is enforced.
Adaptable *"Options are future proofed to*	0 The status quo is the most adaptable option, but evidence suggests this flexibility is not	+ Dependent on the level of prescription required, requirements would be expected to be	+ Relatively adaptable as practices change over time.	+ All three options will be able to be updated to ensure regulations match international best practice.	- - A total or partial ban would not be able to respond and adapt to changes in risk,

manage risks as there are changes in technology and ways of working"	leading to optimum outcomes.	continuously updated to reflect best practice			technology, or ways of working.
	This criterion presupposes an intention that engineered stone products are something that should remain in the system. This product can and should be eliminated; it is not necessary. Easy to adapt is not necessarily a positive, especially given the significant health outcomes from exposure to toxic engineered stone. Entrenching strong regulations is critical so that they can't be easily undone.	Experience, and ongoing capacity issues in the system, suggests that there are no options that are necessarily adaptable, practically speaking. There is already significant backlog in the system regarding missing regulation/guidance and the updating of current regulation and guidance.		In our opinion "international best practice" is the world leading Australian approach.	This is a positive consideration. A ban provides certainty that protections for workers will not be eroded prematurely. Additionally, there is no reason to believe that the risks associated with engineered stone will change as technology changes. Just as asbestos remains a highly dangerous material to work with, due to the release of carcinogenic fibres when disturbed, so too will engineered stone.
Overall Assessment	0 The status quo, while flexible and an appropriate lever for most businesses, is not currently considered the optimal choice. We	+ + Overall, option 2 is considered to meet or improve most of the criteria. However, more information is required to form a robust opinion.	+ Option 3 may be a good addition to support other options. However, it could be a burden on the regulator.	+ More information is required to inform a robust analysis of exposure monitoring (option 4C). Health monitoring and imposing a general	- There are positives and negatives to this option, however we currently do not have the evidence to suggest an overall positive impact due

	welcome feedback from submitters on the status quo.			duty (options 4A and 4C) is a positive step forward, we would be interested in understanding current practices in this space from submitters.	to the negatives associated with cost and adaptability. Submitters are encouraged to provide any information about the impacts of a ban.
NZCTU comment	By failing to provide a sense of how the different criteria are weighed against each other, the "overall assessment" is effectively meaningless.	Many of these options will be important to give full effect to a total ban on engineered stone, and to safely regulate work with legacy stone. We also see value in putting in place a range of these options to support work with non-engineered stone silica materials.			We struggle to understand how the criteria leads to an assessment that a partial or full ban to be worse overall than the status quo when the scientific evidence is crystal clear that working with engineered stone directly causes long-term and fatal occupational diseases. A total ban will protect workers, provides certainty and clarity, and is the best option for regulator capacity.