

Management of asbestos in recovered fines and recovered materials for beneficial reuse in NSW

Discussion Paper – Submission Form

Submitter Details

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If this is a confidential submission, please tick here:

Responses to questions

You can respond to any questions that are relevant to you. If you only want to submit data or any other relevant information, please email them to asbestosreview@chiefscientist.nsw.gov.au.

Thresholds and screening levels

Question 1: What factors should be considered when deriving a threshold or screening level for asbestos in recovered fines and material for beneficial reuse?

1. Proposed dominant reuse of material
2. Likely exposure to people & receiving environment from use/processing of material
3. Material type, source location and inherent risk profile

Asbestos waste management at recycling facilities

Question 2: Can you provide any data on annual volumes of C&D waste being recycled or alternatively sent to landfill? Data on rejected loads due to asbestos presence and any other data related to all TOR items is welcomed.

Please email data together with this form to asbestosreview@chiefscientist.nsw.gov.au

Question 3: Can you provide any other information on the potential presence of asbestos in recycled C&D material?

- i. Information on the methods of separating and removing asbestos from waste that can inform alternative approaches?
- ii. What reuse scenarios are there for recycled waste, including end-products and their use?
 - i. Waste acceptance criteria/questions to identify contamination prior to collection of materials. (Customer service inquires at point of booking & driver checks prior to collection.
 - i. Visual confirmation of loads of material during receiving material using both skills attained via training and use of technology such as MicroPhazir to validate asbestos contamination.

- ii. Offtake markets continue to mature with lightweight materials such as certain plastics and clean timber having options for beneficial reuse. Heavy materials such as concrete, soils and rubble also have many options for beneficial reuse, however contamination remains a key barrier with source separation the preferred pathway to allow maximum diversion rates can be achieved.

Question 4: While this section focuses on C&D waste, are there other waste types which are suitable for beneficial reuse which have the potential to be contaminated with asbestos?

Green waste continues to provide a challenge regarding contamination, this largely is driven by the commingling of contaminants at point of collection, customer and community education remains the key lever to reduce this occurrence.

Management of asbestos in soil

Question 5: Is it appropriate for the health screening levels for asbestos in soils to apply to asbestos in waste? Note that the threshold level in this instance refers to a level where further action is required.

- i. Why or why not?
 - i. Health monitoring is a proactive step to ensure the ongoing health of workers and others who are involved with soil which have asbestos present, a similar approach to Crystalline Silica would be a robust way of designing such monitoring. The implementation of monitoring would contribute to business's move to a more risk-based approach to asbestos contamination and drive innovation to reduce the risk profile relating to worker health.

Question 6: Health screening levels are not the only tool used for managing asbestos in soils. If threshold levels in soils were to be applied to asbestos in **waste for beneficial reuse**,

- i. what other tools can support managing asbestos in waste for beneficial reuse?
- ii. what would be the limitations, costs, or feasibility of safely removing asbestos in waste?
- iii. are there certain scenarios where recycled C&D material should not be reused?
- iv. are there certain scenarios where reuse of recycled C&D material could result in land legacy issues?

- i. Improved testing, sampling, and detection process through the full lifecycle of soil reclamation, more robust process at point of origin would allow more defined pathways for the ongoing potential use of soils.
- ii. The removal of asbestos is currently reliant heavily on human controls such as visual inspections, use of handheld detectors. Limited testing regimes exist however more mitigative controls such as technology innovation are still developing and costly to retrofit to existing facilities. Current thresholds of asbestos allowed in material is misaligned to available methods to detect and remove asbestos.
- iii. Heavily contaminated source material which is unable to be decontaminated i.e. Where heavy demolition of contaminated sites has occurred vs deconstruction.
- iv. In general, the reuse of recycled C&D material which has been processed in a manner which is compliant with product quality specifications should not result in land legacy issues.

Standards and guidelines for asbestos in waste

Question 7: Are there other standards or guidelines that would be applicable for managing asbestos in waste for beneficial reuse that can be provided?

- i. Provision of a documented risk approach should be published that:
 1. provides for experts to prescribe acceptable sampling methodologies.
 2. documents health screening levels (not too conservative), following which certain investigations are required; and
 3. provides minimum standards for risk controls (outcome based rather than prescriptive to allow advancements in technology etc).

Question 8: Should the approach in the WA guideline (*Managing asbestos at construction and demolition waste recycling facilities*), be implemented in NSW and if so, why, or why not?

- i. Are there other factors that should be considered if the WA Guideline is to be implemented?
 - ii. Is there an alternative approach that could be considered?
- i. As per our response to Q7, a more risk-based approach that promotes the enhancement and development of risk controls to improve the detection and management of asbestos would be beneficial. Further consideration and guidance on the identification of asbestos prior to collection or acceptance on site would provide valuable to the industry.

Sampling and analysis

Question 9: Apart from AS4964 and ASC NEPM, are there other sampling and analysis methods for detecting and quantifying asbestos in waste materials or recycled products that are being received and processed at recycling facilities?

- i. Are you aware of any other methods/processes for sampling and analysis of asbestos that the Review should consider? If so, please provide details and basis for their relevance to this Review.
- ii. How reliable and accurate are these methods in ensuring that recycled waste is not contaminated?

- i. A tier approach to testing should be consider as part of a risk-based approach, these testing regimes may extend to asbestos detection technology and onsite batch testing of recycled material.
- ii. The accuracy of technology and onsite testing has direct correlation to the application and training provided for these approaches. The use of sampling and analysis must form part of a broader risk-based approach to this subject.

Risk-based approaches for managing asbestos in waste

Question 10: Would a through-chain approach to managing asbestos in waste, where each business looks to minimise or eliminate the risk from asbestos in waste for beneficial reuse, work?

- i. What elements would be part of the system/approach?
 - ii. What would be the advantages/disadvantages of such a system?
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- i. A through- chain approach would be beneficial in minimising the risk profile of contamination. As suggested in the discussion paper systems like HACCP or other industry groups such as IChemE or IOGP which define hazard analysis processes. A consistently applied approach from generation of waste, collection, processing, and reuse would allow the industry to improve performance and instil confidence to end users.
 - ii. Advantages – as outline above
 - iii. Disadvantages – requires business to work together in a uniform manner to realise full risk reduction, inception of holistic guidance material and legislative framework to support the change and ongoing governance.

Question 11: Are there other risk-based approaches to managing asbestos in waste for beneficial reuse?

As referenced above, consultation with wider industries beyond waste both domestically and international may prove beneficial in identifying processes and good practice.

General

Question 12: Is there any further information you would like to provide the Review to assist us with in responding to the Terms of Reference?

The continued desire nationally to reduce volumes of waste to landfill and promotion of Circularity will require governing bodies to adapt legislation and associated supporting material to enable businesses and customer to approach resource recovery and reuse in a pragmatic and risk-based manner. Current requirements relating to Asbestos are misaligned with this desire. The protection of human health & the environment must remain a priority the industry must work in partnership to find new and innovative ways to manage asbestos contamination.

Email the completed form and attach any relevant data and information to asbestosreview@chiefscientist.nsw.gov.au by 31 July 2024.