

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?

Meeting a threshold or screening level after validation sampling of the recycled construction and demolition (C&D) materials should be only one of many “weight of evidence” quality assurance and quality control processes. It is a validation test intended to demonstrate that controls to remove asbestos from the input are achieving the desired outcome, as described in section 7 of the discussion paper.

A threshold or screening level should consider the potential for reuse at sensitive land uses such as residential, child care centres, or recreational areas with exposed soils.

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

Under regulation 18C of the Western Australian (WA) *Waste Avoidance and Resource Recovery Regulations 2008* (WARR Regulations), liable persons are required to lodge annual returns to DWER containing waste and recycling data, including for C&D waste. Summary reported data is available online in the [Waste and Recycling in Western Australia Report 2021-2022](#). Publication of the 2022-

2023 report is expected shortly and C&D data has been confirmed as being consistent with that in the linked 2021-2022 report. Please contact DWER's waste data team at waste.data@dwer.wa.gov.au if you require any further information.

Summary data on asbestos presence or load rejection is not readily available, but DWER does hold information for individual regulated premises basis via reporting obligations under Part V of the *WA Environmental Protection Act 1986*, which can be provided upon request.

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. Asbestos should be removed as early in the process as possible (for example, at the demolition site, prior to demolition). In Western Australia, this process is regulated by WorkSafe. The relevant legislation for asbestos work in WA is the *Work Health and Safety (General) Regulations 2022*.

The guiding principle of DWER's *Guideline: Managing asbestos at construction and demolition waste recycling facilities* is that C&D material accepted at the gate of the premises should already be free of asbestos. Pre-acceptance procedures should be used by the operator, as summarised in section 5.1.1 of the discussion paper.

The licensing and approvals process in Western Australia for C&D recyclers is also supported by DWER's site inspections and compliance investigations, as described in our [Compliance and Enforcement Policy](#).

ii. Recycled C&D materials are used in road base, aggregate, drainage rock, ancillary infrastructure and hard stands for transport as well as for commercial hard stands, and as fill material in construction. In Western Australia, some operators are accredited under the [Roads to Reuse](#) scheme to provide recycled C&D materials specifically intended for use in road construction.

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?

DWER is currently in discussions with operators regarding the possibility of reusing Incinerator Bottom Ash Aggregate derived from waste to energy facilities. As this material is derived from a waste stream there is possibility for asbestos contamination, although composition details are unknown at this time.

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?

The screening level for asbestos content in recycled C&D material in WA is different to the health screening levels for asbestos in soils.

In WA, if recycled C&D material is proposed to be re-used, then it is assessed against a threshold level to ensure the health of those using or coming into contact with recycled C&D materials is protected. DWER requires that the asbestos content (in any form) of any recycled C&D materials

must not exceed 0.001% asbestos weight for weight (w/w) to ensure the health of those using or coming into contact with recycled C&D materials is protected. This criterion was set in consultation with the WA Department of Health.

The criterion for asbestos in C&D material, *in any* form, is equivalent to the WA DoH criteria for fibrous asbestos and asbestos fibres in soils for *all site uses*. Other criteria have also been developed for asbestos-containing material in soil on contaminated sites, which vary by land use.

If asbestos waste is being deposited in a landfill, then the landfill operator should consider what acceptance criteria are appropriate for their operations, including licence conditions under Part V of the *Environmental Protection Act 1986*.

The remediation of asbestos-containing soils is outside the scope of DWER's *Guideline: Managing asbestos at construction and demolition waste recycling facilities*.

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) In WA, DWER is considering the use of recycled material 'Orders' or certificates that include controls for production, management and reuse of the recycled materials. Government policy or economic mechanisms could also potentially be used to encourage the reuse of properly managed materials. An example in WA is the Roads to Reuse Program. Contractors selling material to facilities operating to this standard will be encouraged to ensure material is free of contaminants due to the likelihood of loads being rejected due to stringent checks in place at the gate.
- ii) Poor asbestos management is far more expensive than good management. It is significantly cheaper to manage asbestos at the source rather than managing asbestos contamination.

A limitation recognised on page 11 of the discussion paper and acknowledged in DWER's *Guideline: Managing asbestos at construction and demolition waste recycling facilities* is that there is no one training course available for industry personnel working in the C&D industry. The responsibility is on the operator to provide appropriate training by combining available courses (such as those available through "training.gov.au") with site-specific inductions and training.

In Western Australia, legislation requires a competent person to carry out the pre-demolition inspection or audit for asbestos material. Pre demolition audits and risk assessments are standard practice for large projects, but small-scale residential demolitions often do not have the oversight required to ensure separation of materials on site and management of asbestos risk. That limitation is recognised in WA's guideline by flagging C&D waste from single residential demolition or skip bins as "high risk", therefore requiring detailed visual inspection at the waste facility prior to processing.

- iii) WA's legislation does not constrain the location of the reuse of crushed C&D product once it has left the gate of the licensed premises. A conservative criterion is applied for that reason.
- iv) At least two sites in WA are regulated under the *WA Contaminated Sites Act 2003* (CS Act) because crushed C&D material that was contaminated with asbestos was used as fill material. At one of these properties, contamination was first identified and reported to DWER in 2011. The *WA Guideline: Managing asbestos at construction and demolition waste recycling facilities* was published in December 2012. The second site was recently reported under the CS Act, after C&D waste crushing occurred without a licence under Part V of the *Environmental Protection Act 1986*.

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?

In Western Australia, some operators are accredited under the Roads to Reuse scheme to provide recycled C&D materials specifically intended for use in road construction. The scheme has its own product specification, available from <https://www.wasteauthority.wa.gov.au/programs/view/roads-to-reuse>

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?

No comment.

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?

No comment

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?
 - i. A through-systems approach for the management of risk of asbestos in waste materials is considered best practice and is advocated for through the [Waste Authority's C&D Rollout Plan](#). Key elements of a through-chain approach include a focus on pre demolition audits, and a preference for deconstruction over demolition. Opportunities for demolition efficiencies need to be identified early on with a waste management plan prior to project commencement.
 - ii. Implementation requires a whole of sector approach with government and key members of the demolition sector. Some opportunities and limitations based on WA's experience are addressed in DWER's answer to question 6.

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

No comment

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?

Please note that DWER is currently reviewing the *Guideline: Managing asbestos at construction and demolition waste recycling facilities (2012)*. Draft updates include:

- aligning the validation sampling methodology in the DWER guideline with the WA Department of Health's 2021 Guidelines for the assessment, remediation and management of asbestos contaminated sites;
- aligning with updated work health and safety legislation, especially the *Work Health and Safety (General) Regulations 2022*; and
- clarifying that the remediation of asbestos-contaminated soils at waste facilities is outside the scope of the guideline.

The overall approach to managing waste, as described in the Discussion Paper, is not intended to change. DWER will keep NSW advised of progress on the review.

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