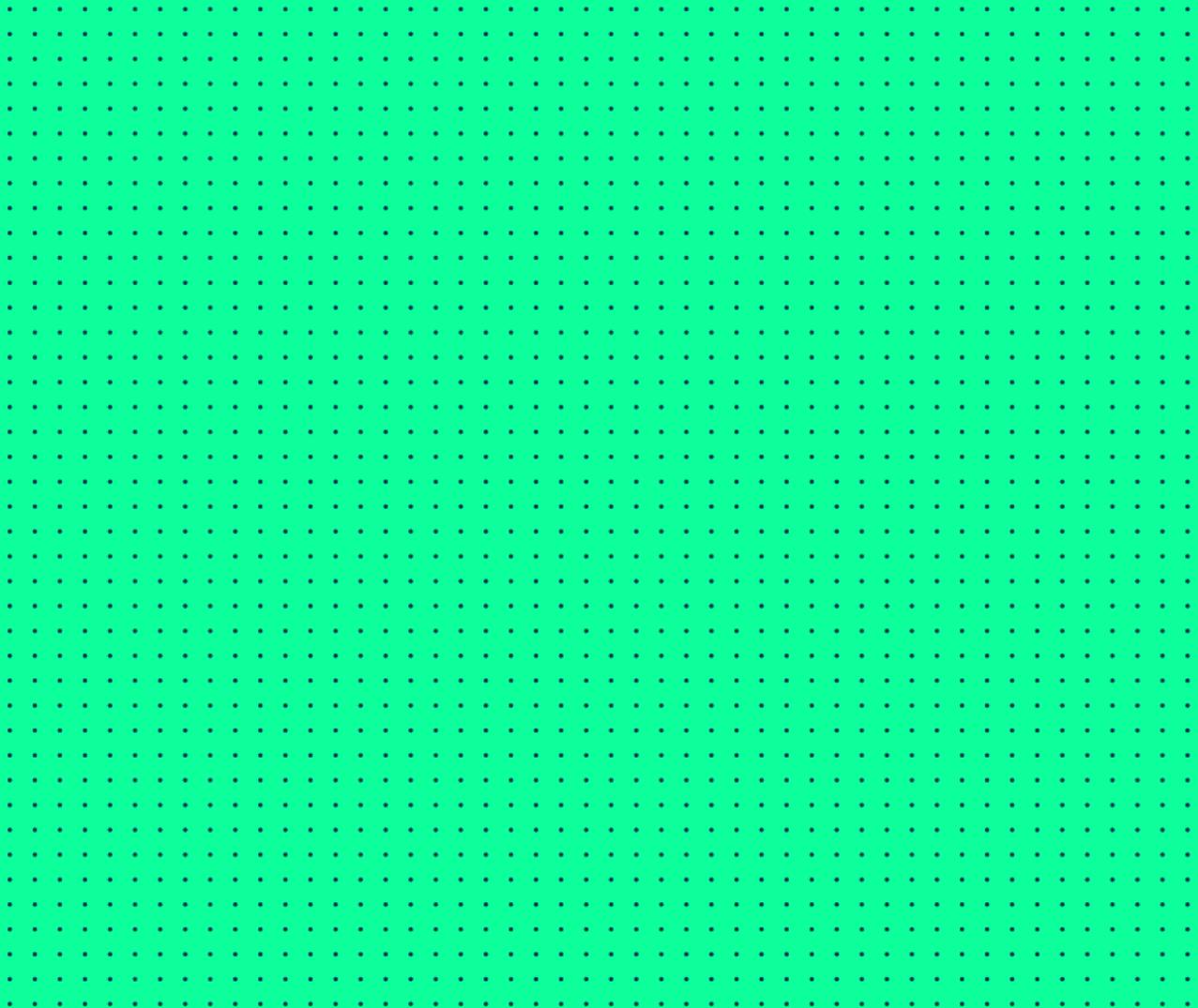




Environment Protection Authority

James Hardie Industries Legacy Asbestos Fill Sites in NSW Assessment Update 2022



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The boundary of each site has been based on multiple lines of evidence and information available to the EPA at the time of this assessment. Precautionary measures to reduce potential asbestos exposure should be adopted when excavating within or adjacent to these sites.

The sites identified should not be considered an exhaustive list of all locations where asbestos fill was placed. There is potential that asbestos-containing fill was placed at other locations such as low-lying ground and former quarries within the City of Parramatta and adjoining areas. Precautionary measures should be considered when excavating within or adjacent to these areas.

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Executive summary

The NSW Environment Protection Authority (EPA) has carried out a review and assessment of sites in NSW where asbestos waste was historically used to fill land.

This assessment update identifies 50 sites affected by legacy asbestos fill, based on multiple lines of evidence. These sites, which include many individual properties, are mainly in western Sydney and used for residential, business, industrial or open space.

To inform this assessment update, the EPA worked with the relevant local councils and NSW Government agencies to undertake desktop reviews, stakeholder engagement and precautionary testing of soils to check for asbestos.

Management and remediation, including installing interim management measures, has been completed at many sites to minimise the risk of exposure to asbestos.

This update provides an evidence base for a long-term solution to address legacy asbestos waste and, in turn, protects communities and our environment.

1. Overview of works since 2017

1.1. Summary

Since 2017, the EPA has assessed **50** sites for legacy asbestos fill. These sites are located mostly in the City of Parramatta local government area. Other local government areas with legacy sites include Blacktown City Council, Cumberland City Council, Fairfield City Council, Liverpool City Council and Wingecarribee Shire Council. This includes five legacy asbestos fill sites that have since been identified and assessed that were not identified in the 2010 report by the NSW Department of Environment, Climate Change and Water (DECCW) titled James Hardie Asbestos Waste Contamination Legacy Summary Project Report, April 2010.

- Of the **50** sites assessed:
 - **29** sites were significantly remediated, redeveloped and/or capped before the current assessment. These sites are not likely to need further action beyond administrative controls, such as an asbestos management plan, to make sure owners and residents are aware of the presence of asbestos fill.
 - **5** sites were remediated or redeveloped during the assessment update process. These sites are not likely to need further action beyond administrative controls, such as an asbestos management plan, to make sure owners and residents are aware of the presence of asbestos fill.
 - **4** sites are proposed to be remediated or redeveloped in the future and legacy asbestos is to be removed or managed at that time
 - **7** sites require further management measures or administrative controls to manage legacy asbestos fill. These sites are predominantly residential land use.
- **4** sites are potentially affected by legacy asbestos based on current information. All 4 sites have, or are being, redeveloped and the potential of asbestos is being managed
- the exact location of **one** site could not be determined based on current information; however, the general area of asbestos disposal is known.

Site 36 in the DECCW 2010 report was a duplicate of Site 37. Site 37 is not included in this 2022 assessment update.

Site 18 in the DECCW 2010 report was reassessed and found not to be affected by legacy asbestos fill. Site 18 is not included in this 2022 assessment update.

While the EPA has endeavoured to identify and assess most legacy asbestos fill sites, it is possible that additional sites will be found in the future.

2. Background

2.1. What is asbestos?

Asbestos is a group of naturally occurring fibrous minerals. Asbestos was used to create cheap, lightweight, and fire-resistant materials for use in building, manufacturing and utilities. Millions of Australian homes contain asbestos. Asbestos is common in NSW homes and buildings constructed or renovated before 1990, after which it was phased out.

There are two types of asbestos – friable and non-friable. When dry, friable asbestos can be crumbled, pulverised or reduced to a powder in the hand. When dry, non-friable asbestos cannot be crumbled, pulverised or reduced to a powder by hand pressure. It is mixed with cement or other bonding materials and is also known as bonded asbestos. Non-friable asbestos can become friable asbestos if the asbestos is damaged or old.

2.2. How can asbestos affect my health?

Asbestos buried in soil is low risk if it is covered and not disturbed. However, if uncovered or disturbed, asbestos fibres can become airborne and breathed in or ingested, which can cause health risks. Exposure to asbestos fibres can cause serious health conditions like asbestosis, lung cancer and mesothelioma.

The risk of contracting these diseases increases with the number of fibres inhaled and the risk of lung cancer from inhaling asbestos fibres is greater if you smoke. Small quantities of asbestos fibres are present in the air at all times and are being breathed by everyone without any ill effects. People who develop asbestos-related health problems have usually been exposed to high levels of asbestos for a long time. The symptoms of these diseases do not usually appear until about 20 to 30 years after the first exposure to asbestos.

2.3. James Hardie asbestos waste contamination legacy

Between the 1950s and 1970s, James Hardie provided asbestos waste as fill to various sites around western Sydney, mostly in the City of Parramatta local government area. Other local government areas with legacy sites include Cumberland City Council, Liverpool City Council, Blacktown City Council, Fairfield City Council and Wingecarribee Shire Council.

Between 2007 and 2009, the Department of Environment, Climate Change and Water (DECCW) used records provided by James Hardie related entities to identify up to 47 potential legacy asbestos fill sites in NSW. Of these sites, DECCW:

- inspected and assessed 26 sites. None were considered to pose a significant risk of harm, largely due to the buried nature of much of the disposed material and the inaccessible locations of many of the disposal sites,
- could not locate 15 sites based on information provided at the time,
- identified five sites as being significantly redeveloped and/or managed by a public authority, and
- found one site was a duplicate.

Sites which had received the asbestos waste as fill were often spread across multiple land parcels resulting in hundreds of individual properties being affected. The land use varied and included a mixture of residential, business and industrial, open space and stormwater and infrastructure corridors. Many of these sites have since been redeveloped.

DECCW published the [James Hardie Asbestos Waste Contamination Legacy Summary Project Report, April 2010](#) (DECCW 2010 Report) which contained known legacy asbestos fill sites. Based on the findings, DECCW recommended local councils implement a range of site management actions to minimise potential exposure to asbestos fill. Friable asbestos was not identified at the time.

Between August 2016 and April 2017 the City of Parramatta found friable asbestos in the soil at several residential properties identified in the DECCW 2010 report. As friable asbestos can become loose and airborne, the health risk posed to local communities escalated.

In April 2017 the NSW Ombudsman released [Asbestos: How NSW Government agencies deal with the problem](#). This report called on the NSW Government to test all sites identified in the DECCW 2010 report and pay for the remediation of sites where asbestos was found. The NSW Ombudsman also called on the NSW Government to pay for the acquisition and/or remediation of residential properties where appreciable quantities of friable asbestos was found.

3. Work undertaken since 2017

The EPA has reviewed and assessed sites identified in the DECCW 2010 report. To inform this work, the EPA worked with local councils and NSW Government agencies to undertake desktop reviews, community engagement and voluntary soil sampling to check for friable and non-friable asbestos.

Residents at affected properties have been provided with information on precautionary steps they can take to protect their health. These steps are detailed in two fact sheets provided to residents. The EPA working with NSW Health and SafeWork NSW has undertaken interim management measures at some residential properties.

The NSW Government is committed to managing, monitoring and responding to asbestos in the community including at identified legacy asbestos fill sites.

3.1. Scope of work

To inform this assessment update report, the EPA has:

- undertaken prioritised site assessments through desktop reviews of historical records, digital collections such as Trove, aerial imagery and site inspections
- engaged with affected property owners, residents and local councils
- implemented opt-in soil sampling on residential properties
- installed interim management measures such as soil capping at residential properties where asbestos was identified in shallow soils with poor ground cover.

This work since 2017 has resulted in the addition of five new sites that were not previously identified in the DECCW 2010 report. This means there are currently 50 sites identified.

3.2. Desktop review and site identification

In assessing each of the legacy asbestos fill sites, the EPA reviewed information from the following sources:

- information provided to DECCW in 2007 by James Hardie related entities. This information relates to the identity and approximate locations of legacy asbestos fill sites, and was provided in response to an order issued by DECCW under section 77 of the *Contaminated Land Management Act 1997*
- the DECCW 2010 report
- historical and current aerial photographs
- historical and current property title and business name searches
- records provided by local councils and NSW Government agencies such as Transport for NSW, Sydney Olympic Park Authority and Sydney Water. These records include sampling reports, meeting minutes and archives
- EPA records for sites subject to EPA regulation, either under the *Protection of the Environment Operations Act 1997* (for example, sites which hold an environment protection licence) or under the *Contaminated Land Management Act 1997* (for example, sites on the EPA's contaminated land public register)
- limited anecdotal information from local councils, residents, property owners and site operators.

3.3. Community engagement

The EPA and its partners (local councils, NSW Health and SafeWork NSW) engaged with a range of community stakeholders to support the assessment update program. Community engagement has included:

- doorknocks of affected residential communities and property owners
- community drop-in sessions
- face-to-face meetings with residents
- update and advisory letters regarding the progress of the assessment
- responses to correspondence and enquiries from members of the public and media agencies.

Other landowners, such as Transport for NSW and Sydney Water, undertook community engagement by door knocking and letter box drops with residents before and after sampling and management works.

3.4. Soil sampling program

With funding from the then NSW Department of Finance, Services and Innovation, the EPA engaged environmental consultants to sample soil at residential properties which may have historically received asbestos fill. Free opt-in soil sampling was offered to residential property owners. Prior to sampling, the EPA sought agreement and consent from property owners.

These activities were carried out for each property where the owner gave consent to sample:

- a desktop review of available information relevant to the property (historical records, aerial imagery, maps and council records)
- a visual inspection of the property to identify suitable sampling locations and buried utilities
- hand excavation of test holes and collection of samples from areas of soft ground at the property. The maximum depth of sampling was one metre below ground level
- air monitoring and collection of air samples
- laboratory analysis of soil and air samples for asbestos fibres and reporting of results.

The EPA has used sampling results to help define the extent and nature of legacy asbestos fill in residential areas and determine the properties which were offered interim management measures.

After sampling, results were presented as personalised property reports to each property owner and their local council.

3.5. Interim management measures

The EPA, in consultation with NSW Health and SafeWork NSW, completed interim management measures at 26 affected **residential** properties where asbestos fill had been found. Interim management measures were appropriate for and have been installed at three of the five newly identified legacy fill sites.

Interim management measures are a 'make safe' response until a long-term solution is formalised and may include:

- capping areas of bare soil affected by friable asbestos with geofabric, clean soil, turf and/or mulch or planter boxes
- carrying out minor and localised excavation of asbestos impacted soil to allow for the installation of capping
- localised hand-removal (emu-picking) of non-friable asbestos found on the ground
- providing residents with a personalised asbestos management plan for their properties. The plan includes advice on maintaining ground cover and restricting excavations at the property.

Interim management measures were installed by environmental consultants engaged by the EPA. Details of interim management measures are available from the local council.

In 2022 the EPA offered to inspect the condition of the interim management measures previously provided at residential properties and if needed facilitate their repair or replacement at no cost to owners.

4. Details of work done since 2017

4.1. Status and current management

Asbestos management at the identified legacy asbestos sites are described below. At some sites a combination of management approaches has been used to suit site-specific conditions.

4.1.1. Encapsulation

Encapsulation involves placing barriers and capping layers above asbestos affected soils. Examples of encapsulation used at legacy asbestos fill sites include the following:

- capping comprising geotextile fabric, clean soil, and a range of residential landscaping solutions, including turf, mulch and planter boxes. These have been installed by EPA contractors at several residential properties.
- hardstand concrete and asphalt. Most business and industrial sites have been covered by concrete and other hardstand materials during previous remediation and/or redevelopment.
- capping comprising geotextile fabric, clean soil and turf suitable for sporting and recreational activities has been installed by local councils at public open space sites.

4.1.2. Access restrictions

Several properties within the identified sites have had access restricted by temporary or permanent fencing and signage. Closure may be an interim management approach while long-term management approaches are investigated, designed and commissioned. Access restrictions have also been used at parts of open space sites within the City of Parramatta area where encapsulation is not possible due to geotechnical or other site constraints.

4.1.3. Administrative controls, communication and awareness

Asbestos management plans are in place for properties at many of the legacy asbestos fill sites.

EPA contractors have developed site-specific asbestos management plans for some residential properties identified as having asbestos in soils. Precautionary advice has been provided to residents of identified residential properties. This advice was provided at the start of the program and remains in place for all identified properties. The advice notes that grass cover should be maintained, ground disturbance and the generation of dust should be avoided, and mowing should be undertaken on a high setting.

For open space, business and industrial properties, asbestos management plans are being implemented. The plans protect members of the public and workers on these properties by providing information on how to manage asbestos.

4.2. Ongoing site management

4.2.1. Management plans

Most open space, business and industrial sites are currently subject to asbestos management plans or environmental management plans. These ensure that residual asbestos contamination in soil is not exposed, and that capping layers are inspected and maintained. These management plans will likely remain in perpetuity and are the responsibility of the landowner or occupant. The presence of these plans is noted by local councils within internal registers and/or via section 10.7 planning certificates under the *Environment Planning and Assessment Act 1979*. This ensures the plans are available to current and future owners.

During the assessment, the EPA has undertaken consultation with business and industrial site landowners and occupants to identify if asbestos management plans exist for each site.

4.2.2. Sites regulated by the EPA

The EPA regulates several legacy asbestos fill sites through environment protection licences and notices issued under the *Protection of the Environment Operations Act 1997* and/or the *Contaminated Land Management Act 1997*. All sites regulated by the EPA are recorded on the EPA's public register. Asbestos management through regulation is ongoing.

4.2.3. Sites managed by Council

Councils have sampled, remediated or are continuing to manage the open space sites. Councils have used both interim and long-term management approaches, such as temporary closures of some areas to improve grass coverage and capping of sporting fields. Some works, such as stabilising steep embankments are ongoing due to site ownership and geotechnical complexities, as well as planning requirements. Once these works are complete, these sites will not require any further long-term remediation but will require ongoing management under an asbestos management plan.

4.2.4. Sites managed by NSW Government agencies

Several sites, or parts of sites, are owned and managed by NSW Government agencies such as Transport for NSW, Sydney Water and Sydney Olympic Park Authority. Some works are ongoing at these sites due to complexities with site ownership (both public and private). NSW Government agencies are continuing to work collaboratively to ensure these legacy asbestos sites are effectively managed in the interim and long-term to mitigate any potential risk.

5. Next steps

5.1. Update of planning certificates and council records

A planning certificate under section 10.7 of the *Environment Planning and Assessment Act 1979* is a legal document that explains the planning rules applying to any development of a property.

The City of Parramatta has advised the EPA that planning certificates for residential properties tested in the EPA voluntary sampling program have been updated with the sampling results. Residents were made aware of this update during consultation as part of the sampling program. The presence of an asbestos management plan on the property has been internally recorded by Council and noted on the planning certificate.

The EPA will work with the other five councils that have legacy asbestos fill sites (Blacktown City Council, Cumberland City Council, Fairfield City Council, Liverpool City Council and Wingecarribee Shire Council) to assist in assessing and updating planning certificates for identified properties. The EPA will assist councils who may wish to review and update their internal contaminated site registers and records.

5.2. NSW Ombudsman's recommendations

The NSW Government has provided in-principle support to the recommendations outlined in the 2017 Ombudsman report [Asbestos: How NSW government agencies deal with the problem](#).

The EPA, working with local councils and NSW Government agencies, has progressed these NSW Ombudsman's recommendations. It has tested sites identified in the 2010 DECCW report and completed interim management measures at residential properties at the NSW Government's expense. It continues to undertake public education about simple steps people can take to protect their health.

The NSW Government is committed to managing, monitoring and responding to asbestos in the community, including at legacy asbestos fill sites. This report provides an evidence base for a long-

term solution to address legacy asbestos waste disposal, which is a key priority of the NSW Asbestos Coordination Committee (NACC). Please visit www.asbestos.nsw.gov.au for more information about the NACC.

References

DECCW 2010 *James Hardie Asbestos Waste Contamination Legacy Summary Project Report*

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