Australian Government

Asbestos and Silica Safety and Eradication Agency

Asbestos National Strategic Plan

Implementation 2019–23

Asbestos National Strategic Plan 2019–2023

Final progress report (July 2022 to June 2024)

This document has been prepared by:

Australian Government
Asbestos and Silica Safety and Eradication Agency

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Contents

In compiling this report, the Asbestos and Silica Safety and Eradication Agency (ASSEA) has relied on data and information provided by state and territory governments and the Australian Government (together, 'the jurisdictions'). ASSEA has worked closely with the jurisdictions to address any gaps and has used all reasonable endeavours to ensure this report is an accurate reflection of Australian-wide measures taken to implement the National Strategic Plan for Asbestos Awareness and Management 2019–2023 (Phase 2 Asbestos National Strategic Plan). There are, however, unavoidable gaps for reasons including unavailability of data and information, and/or differing interpretations of reporting requirements taken by the jurisdictions. ASSEA has attempted to present data and information obtained from the jurisdictions in a consistent manner, to track progress against the Phase 2 Asbestos National Strategic Plan targets. Each year, ASSEA conducts a post-data collection review and implements enhanced data capture and governance processes to continually improve the quality of future reports.

List of acronyms

Term	Definition
ABAN	Asia Ban Network
ABF	Australian Border Force
ACCC	Australian Competition and Consumer Commission
ACD	Asbestos-containing dust and debris
ACM	Asbestos-containing material
ACT	Australian Capital Territory
ADDRI	Asbestos and Dust Diseases Research Institute
ADSA	Asbestos Disease Society of Australia
AI	Artificial Intelligence
AIHW	Australian Institute of Health and Welfare
AMR	Australian Mesothelioma Registry
APHEDA	Australian People for Health, Education and Development Abroad Incorporated
ARF	Asbestos Removal Fund
ASR	Age-standardised rate
ASSEA	Asbestos and Silica Safety and Eradication Agency
ASSEC	Asbestos and Silica Safety and Eradication Council
BRII RegTech	Business Research and Innovation Initiative, Regulatory Technology
CA	Cancer Australia
CALD	Culturally and Linguistically Diverse
C&D	Construction and demolition
CI	Confidence interval
CoP	Conference of the Parties
CSO	Common Scientific Outline
CUN	Clean Up Notice
DAC	Discrete Aboriginal Community
DALY	Disability-adjusted life year
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DESI	Department of Environment, Science and Innovation (Queensland)
DFAT	Department of Foreign Affairs and Trade
DIT	Department of Infrastructure and Transport (South Australia)
DIY	Do-it-yourself
EAN	Environmental Action Notice
EHO	Environmental Health Officer

Term	Definition
EPA	Environment Protection Authority
FY	Financial year
GBD	Global Burden of Disease
GMA	Greater Metropolitan Area
IARC	International Agency for Research on Cancer
ICA	Insurance Council of Australia
ICRP	International Cancer Research Partnership
IPEF	Indo-Pacific Economic Framework
LALC	Local Aboriginal Land Council
LGA	Local government area
LGNSW	Local Government NSW
ML	Machine learning
NAAW	National Asbestos Awareness Week
NHMRC	National Health and Medical Research Council
NSW	New South Wales
NT	Northern Territory
OIR	Office of Industrial Relations (Queensland)
OSH	Occupational Safety and Health
PacWaste	The Pacific Hazardous Waste Management
Qld	Queensland
QR	Quick response (code)
SA	South Australia
SA1	Statistical Area Level 1 (or Level 2, etc)
SPREP	Secretariat of the Pacific Regional Environment Programme
Tas	Tasmania
UI	Uncertainty interval
VAEA	Victorian Asbestos Eradication Agency
Vic	Victoria
WA	Western Australia
WHO	World Health Organization
WHS	Work health and safety
WHSQ	Workplace Health and Safety Queensland

Executive summary

The Asbestos and Silica Safety and Eradication Agency (ASSEA) is responsible for developing national strategic plans and coordinating the monitoring and reporting of jurisdictional implementation, as well as the delivery of several agreed actions within the plans. For asbestos, these strategic plans have established a phased framework for all levels of government to work cooperatively in the areas of asbestos awareness, identification, effective management, prioritised removal and disposal. The Asbestos National Strategic Plan also recognises Australia's international role in leading the campaign for global asbestos bans.

A final progress update in implementing the National Strategic Plan for Asbestos Awareness and Management 2019–2023 (Phase 2 Asbestos National Strategic Plan) is presented in this report.

The report is based on data and information provided by state and territory governments and the Australian Government (together, 'the jurisdictions'), as well as research undertaken by ASSEA, for the period 1 July 2022 to 30 June 2024.

Overall, there has been a considerable improvement in asbestos management during the 5-year term of the Phase 2 Asbestos National Strategic Plan. Collectively, we have remained steadfast in the interim period between Asbestos National Strategic Plans, with the Asbestos National Strategic Plan 2024-2030 (Phase 3 Asbestos National Strategic Plan) endorsed by all Australian governments in August 2024.

This endorsement strengthens the national commitment to implementing the priorities in Phase 3.

Improvements will no doubt continue, as the enduring collaborations are further strengthened and reinforced by our continuing common goal of eliminating asbestos-related disease in Australia.

Summary of progress

Progress against the national targets in the Phase 2 Asbestos National Strategic Plan shows that five of the nine targets have been satisfactorily advanced or substantively met, and four of the nine targets require ongoing work.

Progress is qualitatively represented below using the following key as a guide:

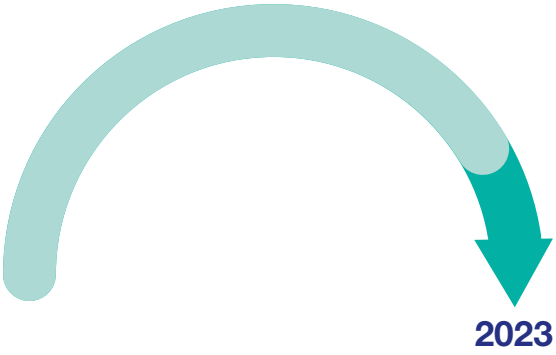
More work needed

Satisfactorily advanced or substantively met

Previous (lighter shade) and current (darker shade) progress are noted for comparison. Where more work is needed, this reflects the complexity of the inter-connected landscape in which we all operate. In these instances, sustained effort remains a priority in the Phase 3 Asbestos National Strategic Plan.

Target 1

Increased awareness of the health risks of ACMs and where to source information

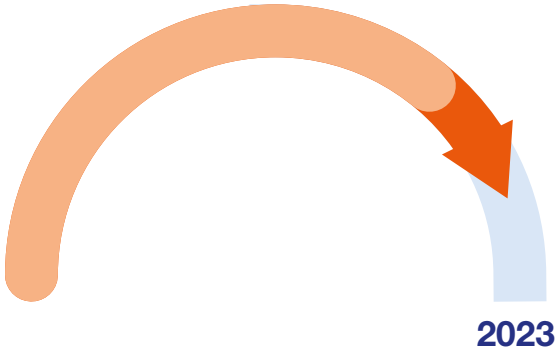


Asbestos safety awareness raising activities have become more consistent and embedded in Australian communities. Participation of the jurisdictions in national campaigns has grown with their adoption of materials prepared by ASSEA, resulting in an increased understanding of the risks and where to find information, as evident in post-awareness campaign evaluations. Although the extent of improvement has not yet been specifically measured in the cohorts listed in the target during the reporting period, there's adequate evidence to suggest that awareness has overall been **satisfactorily advanced**. Future activities will focus on encouraging sustained behavioural change across all priorities.

Target 2

All governments have identified and assessed the risks associated with ACMs in publicly owned and controlled buildings, land and infrastructure

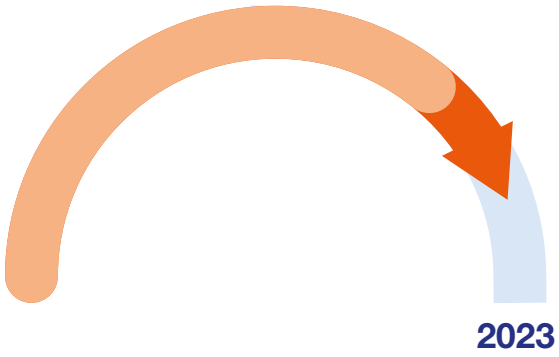
All governments have identified and assessed the risk associated with asbestos-containing material (ACM) in properties they own or control. However, measurement of this target focuses on the extent to which governments have centralised, electronic asbestos registers, and consistent risk ratings. Three of the nine governments have met these measures during the reporting period, thus **more work** remains for some jurisdictions.



Target 3

All jurisdictions have schedules and processes for the prioritised safe removal according to risk of ACMs from public buildings and infrastructure, and safe disposal of that material

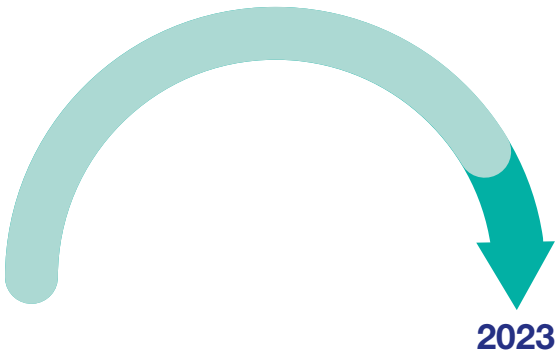
All governments have processes for removing ACMs according to risk, however, for the most part this is not scheduled or prioritised across government. One government has a centralised schedule for prioritised safe removal; another has a fund to enable government agencies to undertake prioritised safe removal under a decentralised model. While significant progress has been made, this target was not met in all jurisdictions and **more work** is required.



Target 4

All regulators have in place and have implemented asbestos compliance programs

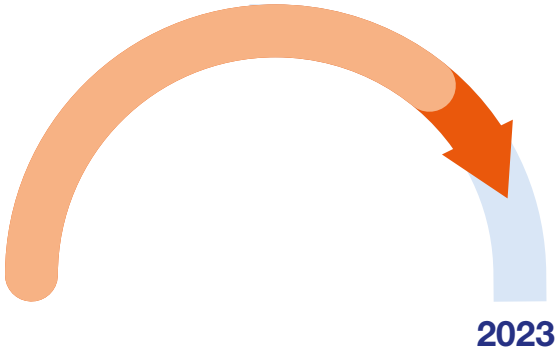
Targets associated with compliance and enforcement activity (Targets 4 and 6) have been **substantively met**, noting that future activities will focus on ways to support and increase compliance.



Target 5

All commercial buildings which are required by law to maintain asbestos registers, have up-to-date registers and management plans that are actively being implemented

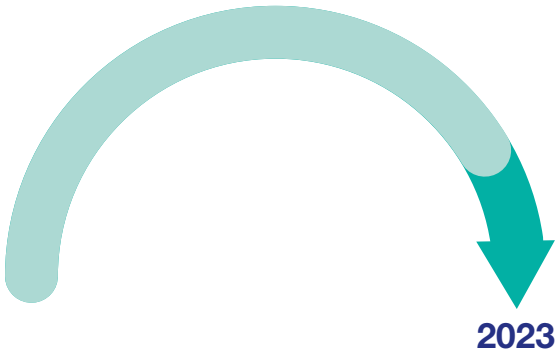
Jurisdictional compliance programs conducted for asbestos registers and management plans in commercial buildings show these are not always being implemented as required by law, so **more work** is needed. Future activities will focus on supporting compliance and developing risk-based, prioritised ACM removal programs, including through incentives where appropriate.



Target 6

All regulators are investigating, prosecuting and penalising serious known breaches of asbestos-related laws including illegal waste disposal and importation

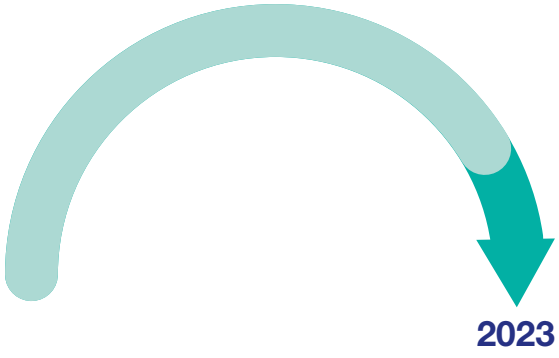
Targets associated with compliance and enforcement activity (Targets 4 and 6) have been **substantively met,** noting that future activities will focus on consistency to improve the behavioural outcomes of any enforcement measure.



Target 7

Easier and cheaper disposal of asbestos waste

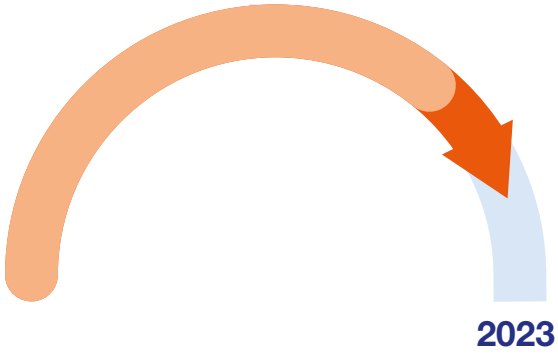
Disposing of asbestos waste has been made cheaper in most jurisdictions, with waivers of government waste levies where appropriate. Easier disposal has also been facilitated by allowing additional waste transfer sites to accept asbestos waste from some sources. This target has been **satisfactorily advanced**, and future activities will focus on national consistency across the asbestos waste journey.



Target 8

Bans of asbestos production and use in South-East Asia and the Pacific have been influenced and progressed

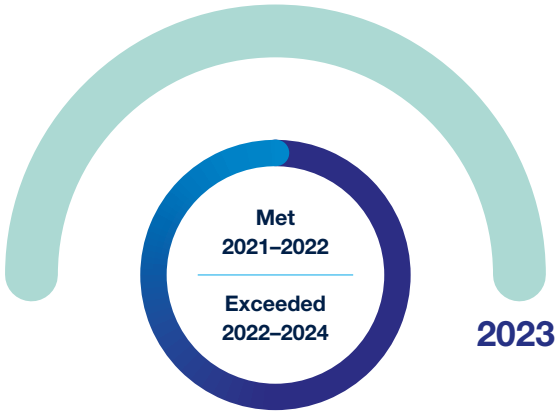
There has been further progress in influencing asbestos bans, in the target regions of South-East Asia and the Pacific, and elsewhere. **More work** is needed, and a future focus will be to continue to challenge the asbestos industry, through influence on several international agreements, supporting international capacity and capability building programs and countering disinformation and misinformation campaigns.



Target 9

Develop an evidence-based national picture that assesses the likelihood of asbestos containing materials being present in the residential environment

This target was met in the 2021–2022 reporting period. Further work undertaken in subsequent years has expanded on the intent, and **exceeded** the measures originally set for this target, by updating the heatmap using additional data and enhanced methods. Future activities will focus on promoting and improving the heatmap, to assist with increasing the identification of ACMs in residential properties and supporting their safe removal.



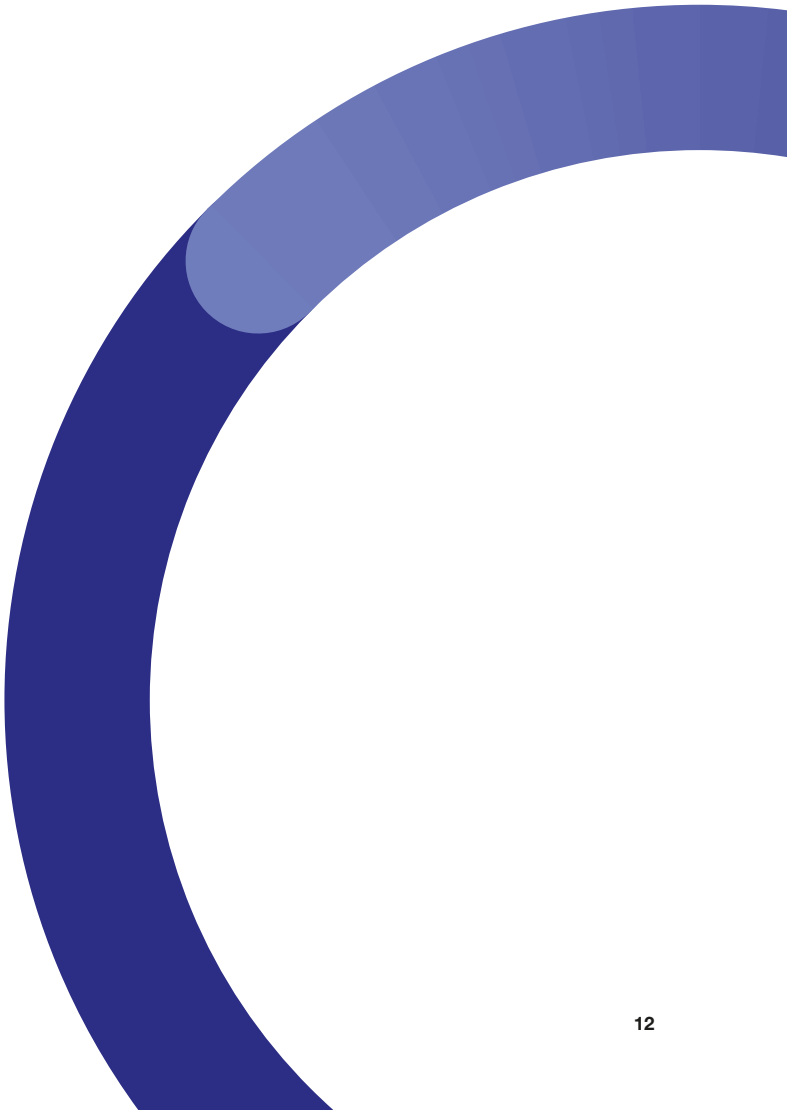
1. Introduction

This report summarises collective efforts to implement the National Strategic Plan for Asbestos Awareness and Management 2019–2023 (Phase 2 Asbestos National Strategic Plan), covering the final reporting period of July 2022 to June 2024.

Exposure to asbestos fibres can cause several life-threatening diseases, known collectively as asbestos-related diseases. All governments across Australia are working cooperatively towards the common national goal of eliminating asbestos-related diseases and have significantly improved asbestos management practices during the 5-year term of the Phase 2 Asbestos National Strategic Plan.

The Phase 2 Asbestos National Strategic Plan ended in December 2023, however work to address the asbestos legacy in Australia continued unabated, while the Asbestos National Strategic Plan 2024–2030 (Phase 3 Asbestos National Strategic Plan) was developed and endorsed by July 2024. This report focuses on the period 1 July 2022 to 30 June 2024, covering the final 18 months of the Phase 2 Asbestos National Strategic Plan plus the interim period between Asbestos National Strategic Plans. For simplicity, progress is measured against the nine national targets in the Phase 2 Asbestos National Strategic Plan. Details are drawn from data and information provided by state and territory governments and the Australian Government (together, 'the jurisdictions'), as well as research undertaken by the Asbestos and Silica Safety and Eradication Agency (ASSEA).

Many measures taken to implement the Phase 2 Asbestos National Strategic Plan commenced in previous years. These will need to continue to be progressed in the longer term to manage Australia's asbestos legacy and ultimately achieve the aim of eliminating asbestos-related disease. As such, this report should be read in conjunction with previous progress reports for the Phase 2 Asbestos National Strategic Plan; the Mid-term Progress Report, covering 2019 to June 2021, and the Asbestos National Strategic Plan 2021–2022 Progress Report, covering 1 July 2021 to 30 June 2022.



1.1 Report structure

Table 1 presents the report's chapter alignment with the national priorities and targets under the Phase 2 Asbestos National Strategic Plan.

Table 1: Alignment of progress report chapters with national priorities and targets

Report chapter	National priority	National target
1. Introduction	–	–
2. Asbestos-related diseases	Aim	–
3. Asbestos awareness	Priority 1	Target 1 – Awareness levels
4. Asbestos identification, management and safe removal	Priority 2	Target 2 – Government asbestos registers
		Target 3 – Government prioritised removal
		Target 5 – Workplace asbestos registers
		Target 9 – Residential location modelling
5. Asbestos waste	Priority 3	Target 7 – Disposal initiatives
6. Compliance and enforcement	All priorities	Target 4 – Compliance activities
		Target 6 – Enforcement activities
7. International collaboration and leadership	Priority 4	Target 8 – International bans
8. Phase 3 Asbestos National Strategic Plan	–	–

Each chapter concludes with the general observations on progress against the national targets, the challenges identified in meeting some targets and next steps. These were developed by ASSEA in consultation with the Asbestos and Silica Safety and Eradication Council (ASSEC). The priorities and targets of the Phase 3 Asbestos National Strategic Plan will form the basis of future progress reports.

1.2 The coordination role of the Asbestos and Silica Safety and Eradication Agency

The coordination role of ASSEA centres on ensuring asbestos issues receive the attention and focus needed to drive action across all levels of government. This is achieved through:

- participation in and encouragement of jurisdictional interagency asbestos coordination groups
- collaboration with Commonwealth, state, territory and local governments to champion asbestos safety matters
- asbestos safety research, evaluation and data analytics, which can be used by governments to inform their own asbestos policies and practices
- national asbestos awareness campaigns and related resources that are shared openly for enduring asbestos risk communication with the wider Australian community.

Specific examples of the above actions are documented in subsequent chapters. Collectively, we recognise that all governments along with businesses, unions, individual organisations, advocacy groups, researchers and members of the community need to work altogether to achieve the aims of the Asbestos National Strategic Plan.

1.3 Implementation by jurisdictions

The jurisdictions are responsible for implementing the Asbestos National Strategic Plans and are encouraged to develop jurisdictional asbestos action plans to align with the national priorities. They also assist to measure progress against the national targets. Some jurisdictions achieved this by adopting the Phase 2 Asbestos National Strategic Plan, while five jurisdictions enacted their own asbestos actions plans. Jurisdictional asbestos action plans have been developed by New South Wales (NSW)[1], Queensland (Qld)[2], South Australia (SA)[3], Victoria (Vic)[4] and the Australian Government[5], while WorkSafe in Western Australia (WA) has incorporated asbestos actions into broader strategies for the jurisdiction.[6]

Jurisdictions are also encouraged to establish interagency asbestos coordination groups to help address disconnection and duplication in managing Australia's asbestos legacy. Most governments now have interagency asbestos coordination groups actively working to implement the priorities in their asbestos action plans. For example, the South Australian Asbestos Action Plan Working Group has 23 members representing 16 departments and is a collaborative forum to share asbestos information across the SA government.

ASSEA also leads the design and delivery of actions in collaboration with other jurisdictions and partners, aligned with our functions of research, data, awareness and international leadership. The co-hosting of the ASBESTOS 2024 Conference with the Faculty of Asbestos Management of Australia and New Zealand is another example of ASSEA's coordination of implementation.

The conference, held in Melbourne in March 2024, enabled the exchange of knowledge and expertise to support collaborative action. It focused on new ways to manage, remove and dispose of ageing ACMs, as well as innovations in diagnosing and treating asbestos-related diseases. Over 250 delegates attended in person and virtually, including technical experts, regulators, asbestos disease support and advocacy groups, trade unions and international delegations from Laos, Cambodia and Indonesia.

Delegates at the ASBESTOS 2024 Conference in Melbourne

1 NSW Asbestos Coordination Committee, Asbestos in NSW: Next Horizon, NSW Environment Protection Authority, December 2022; NSW Asbestos Coordination Committee, Asbestos in NSW: Setting the Direction 2021-22, NSW Environment Protection Authority, November 2021; and NSW Asbestos Waste Strategy 2019-21, NSW Environment Protection Authority, September 2019.

2 Statewide Strategic Plan for the Safe Management of Asbestos in Queensland 2022-2025, Qld Office of Industrial Relations, July 2022.

3 SA Asbestos Action Plan Strategic Group, South Australian Asbestos Action Plan 2019-2023, SafeWork SA, 2020.

4 *Action Plan for Asbestos Awareness and Management Victoria 2021–2023* (not published).

5 *Australian Government Action Plan for Asbestos Awareness and Management 2021–2023* (not published).

6 WorkSafe WA, Dust Strategy 2023–24, Department of Energy, Mines, Industry Regulation and Safety WA, 2022; and WorkSafe WA, WorkSafe: The way forward 2023–24 to 2025–26, Department of Energy, Mines, Industry Regulation and Safety WA, 2023.

2. Asbestos-related diseases

The overarching aim of the Phase 2 Asbestos National Strategic Plan is to prevent exposure to asbestos fibres to eliminate asbestos-related disease in Australia.

Asbestos-related diseases include asbestosis, pleural plaques, mesothelioma and cancers of the lung, larynx and ovary.

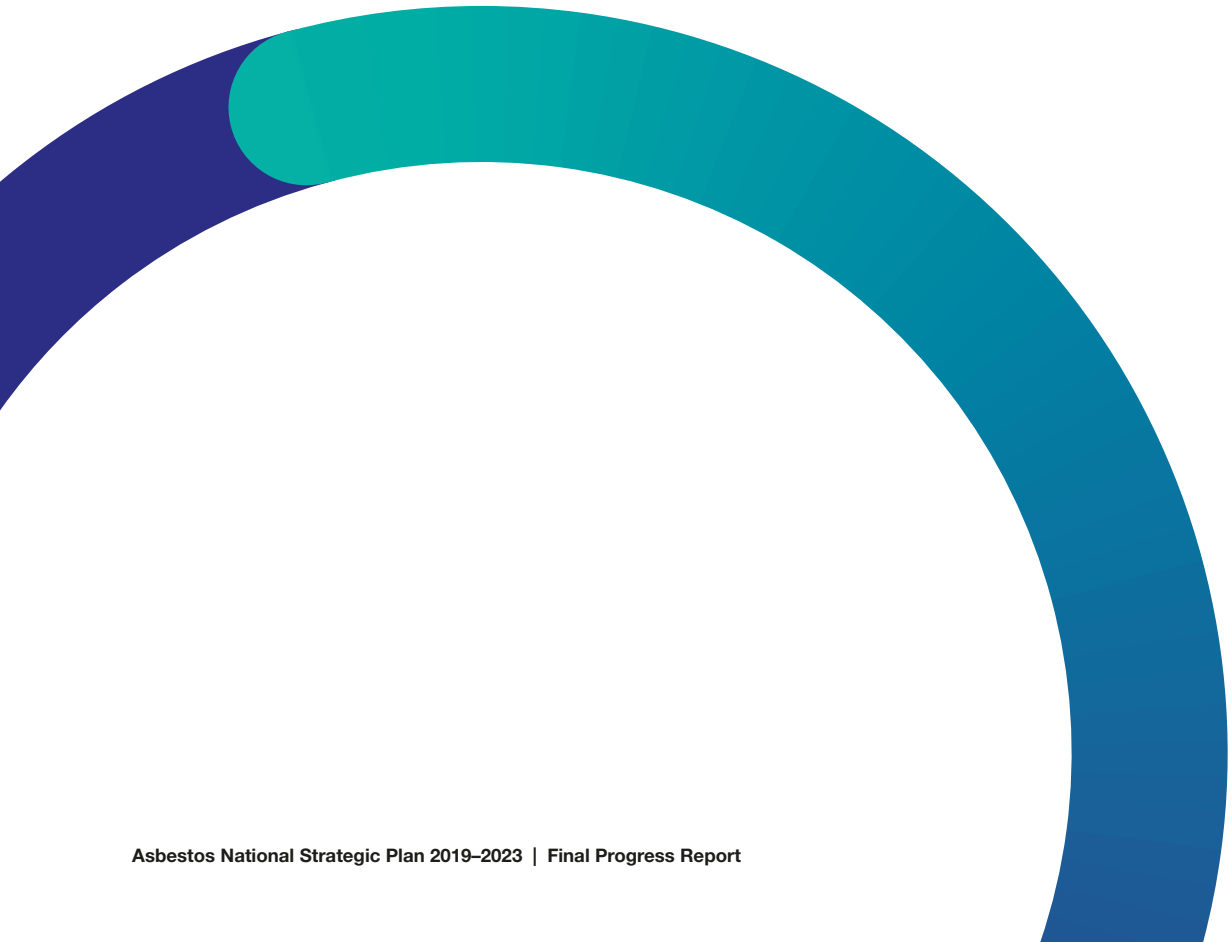
The previous progress report referred to data on mesothelioma cases, which was the only new data published in that period. It was derived from the Australian Institute of Health and Welfare (AIHW) report, Mesothelioma in Australia 2021, based on data recorded in the Australian Mesothelioma Registry (AMR). It was noted that the number of cases of mesothelioma diagnosed each year had steadily increased over the past 40 years. Also, trends over time indicated the proportion of women dying from mesothelioma had increased, and that both occupational and non-occupational exposures to asbestos were contributing factors.

While exposure to legacy asbestos in Australia from both occupational and non-occupational sources is generally accepted to occur at lower levels than has occurred through past occupational exposure, more information is still needed to assess the health risk posed by these lower levels of exposure.

In the 2022–23 and 2023–24 financial years (FY), ASSEA has continued to monitor the latest data on asbestos-related disease incidence in Australia, to help assess the impact of past actions aimed at eliminating disease and to ensure current and future actions are evidence-based.

ASSEA has also collaborated with experts and undertaken a preliminary review of evidence, to identify gaps in evidence and prioritise areas where further research is required, to enable a better understanding of the current risk posed by low-level exposure due to legacy asbestos.

Findings from our collaborations and the preliminary review conducted during this period have informed the direction of further research that will commence at the end of 2024. New evidence from this work will inform an appropriate response to this risk and help prevent further exposures.



2.1 Data to monitor Australia's asbestos-related disease burden

Australian Mesothelioma Registry

The AMR is the most up-to-date source of data on mesothelioma incidence, mortality, and survival in Australia, with data analysed and reported annually by the AIHW.

The AIHW released Mesothelioma in Australia 2022 in November 2023, which incorporates incidence data for cases of mesothelioma notified to the AMR up until 1 June 2023. The AMR data are supplemented by data from the National Mortality Database and the Australian Cancer Database from the period 1982 to 2010, which is prior to the establishment of the AMR, enabling a description of longer-term trends.

Highlights

The AIHW report identifies that between 700 and 800 people continue to be diagnosed with mesothelioma in Australia each year, and that men were still more likely to be diagnosed with mesothelioma than women across all age groups, likely due to men having had more past occupational exposures to asbestos than women.[7]

While mesothelioma is an aggressive cancer, with very low survival rate compared to other cancers, the average length of time that people survive after being diagnosed with mesothelioma is gradually improving over time. In particular, the age-adjusted, 1-year relative survival of people with mesothelioma has increased since 1990–1994 from 29.7% (95% confidence interval [95% CI] 26.8–32.6) to 48.5% (95% CI 46.9–50.1).[7]

Trends

Not all cases of mesothelioma are reported to the AMR in the year that they are diagnosed, and therefore the number of cases for each year continue to rise in subsequent years of reporting. For example, the previous progress report noted that 722 mesothelioma cases diagnosed in 2021 had been notified to the AMR by 1 November 2022, but the updated Mesothelioma in Australia 2022 – data tables now show this 2021 figure has now increased to 785 as at 1 June 2023.

Newer data as at 1 June 2023 included:

- **637 cases** of mesothelioma diagnosed in 2022 had been reported to the AMR – the median age at diagnosis of 77, and
- **708 deaths** of people with mesothelioma that occurred in 2021, were recorded on the AMR – a rate of 2.1 deaths per 100,000 population.

Longer term disease trends reported in *Mesothelioma in Australia 2022*, continue to show some variation in the age-standardised rate of mesothelioma diagnoses in men and women.

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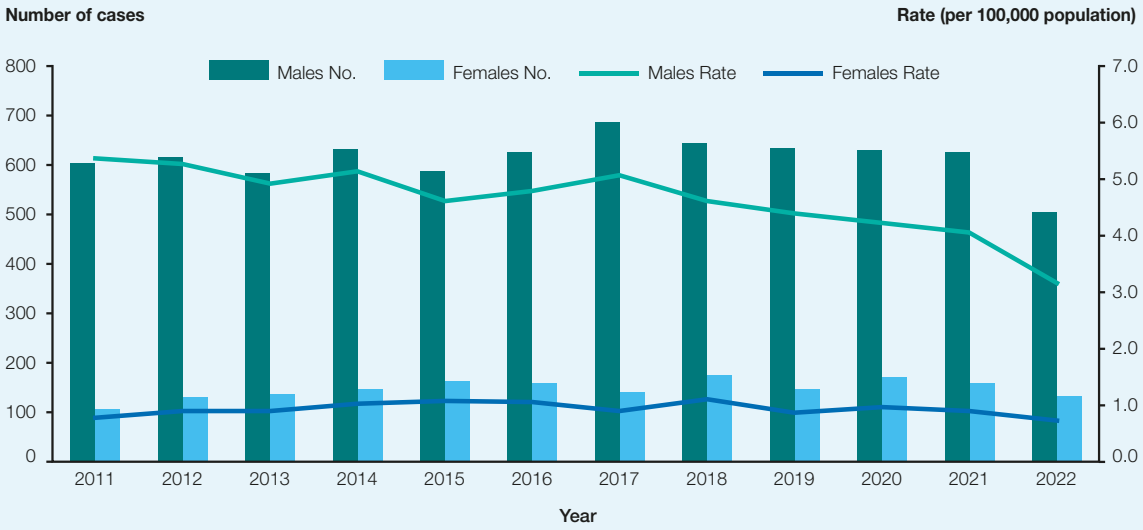
[7] Australian Institute of Health and Welfare (2023) Mesothelioma in Australia 2022, catalogue number CAN 156, AIHW, Australian Government. ISBN: 978-1-923085-33-6 (Online). Available from https://www.aihw.gov.au/reports/cancer/mesothelioma-in-australia-2022/summary

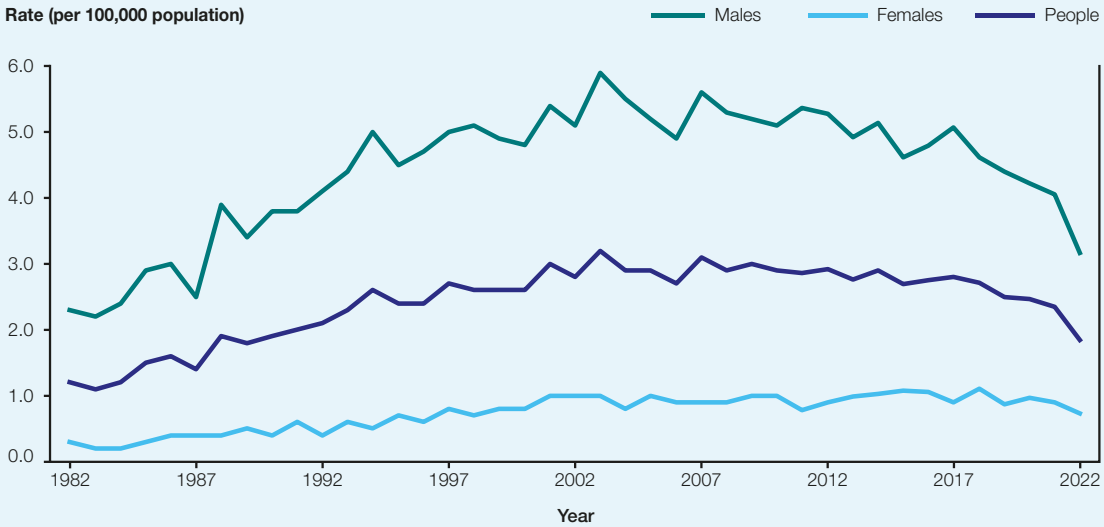
While there has been a steady increase in the number of cases diagnosed each year for both men and women over the past 40 years, there has been a considerable decrease in the age-standardised rate of men diagnosed with the disease since around 2003, and the age-standardised rate of women diagnosed has declined only slightly. As a result, the proportion of mesothelioma cases comprised by women has increased over this period (see Figure 1 and Figure 2). Rates in both figures have been age-standardised to the 2001 Australian Standard Population.

Figure 1: Number and age-standardised rate (ASR, per 100,000 population) of people diagnosed with mesothelioma, by year and sex, 2011 to 2022



Source: AIHW analysis of AMR data as at 1 June 2023; Table A2 in Mesothelioma in Australia 2022 – data tables.

Figure 2: Age-standardised rate (per 100,000 population) of people diagnosed with mesothelioma, by year and sex, 1982 to 2022



Sources: AIHW analysis of AMR data as at 1 June 2023; Table A3 in Mesothelioma in Australia 2022 – data tables.

Exposure pathways

A key focus of the AMR is to monitor changes in the incidence of mesothelioma that may result from ongoing, or possibly increasing, non-occupational exposure to legacy asbestos in the wider built environment. The AMR collects asbestos exposure information via a postal questionnaire and telephone interview from eligible, consenting patients.

Evidence gathered from detailed exposure assessments carried out by the AMR indicates that both occupational and non-occupational exposure to asbestos continue to be potential contributing factors to the development of the reported mesothelioma cases. Furthermore, while occupational exposure is by far the most predominant relevant exposure for men, it is non-occupational exposure that is indicated as the primary contributing factor among women.

Occupational exposure was assessed within three occupational categories – Trades, Water transport, Land transport – with the Trades category reporting the highest percentage of probable exposure.

Among participants in the 'Trades' category, between 2010 and 2022, 'possible or probable' exposure to asbestos was assessed to have occurred in:

- 94% of people in electrical trade jobs
- 90% of people in building trade jobs
- 90% of people in metal production and fabrication jobs
- 86% of people in plumber/gasfitter jobs
- 79% of people in metal fitter/turner and toolmaker jobs

Among participants that were assessed to have had 'possible or probable' non-occupational exposure between 2010 and 2022, the most common contexts in which exposure was assessed to have occurred in were:

- major home renovation that involved asbestos products (excluding paid work) (51% of people)
- lived in house undergoing renovation (39% of people)
- serviced car brakes/clutch (excluding paid work) (30% of people)
- lived in same house as someone with a job that exposed the person to asbestos and who came home dusty (20% of people).
- lived in a house made of fibro that was built between 1947 and 1987 (12% of people)

Of the 1,141 people for whom some form of past exposure was detected, 93% of women reported non-occupational exposure only, compared with 22% of men. Occupational exposure continues to be the most predominant relevant exposure for men by far. Most men had occupational exposure, either alone or also with non-occupational exposure, whereas very few women were assessed to have this same pattern of exposure (see Table 2).

Table 2: Occupational and non-occupational exposure assessment, by sex, 2010–2022

Any exposure indicated	Men		Women		People	
Occupational only	130	14.1%	1	0.5%	131	11.5%
Non-occupational only	203	22.1%	207	93.2%	410	35.9%
Both occupational and non-occupational	586	63.8%	14	6.3%	600	52.6%
Total	**919**	**100%**	**222**	**100%**	**1,141**	**100%**

Source: AIHW analysis of AMR data as at 1 June 2023, based on interviews completed among people who were diagnosed with mesothelioma between 1 July 2010–31 December 2022.

Interpretation of the data

The observed decrease in the age-standardised rate of mesothelioma diagnoses among men (see Figure 1 and Figure 2) may reflect the positive impact of past regulatory actions aimed at controlling risk from occupational asbestos exposure. This is because the reducing rate of mesothelioma diagnoses among men in the last 5 years is aligned with mostly past occupational asbestos exposures, as determined by the AMR exposure assessment (see Table 2). The health benefits of such regulatory actions are only now becoming evident given the long latency of disease onset.

The increasing proportion of women being diagnosed with mesothelioma (see Figure 1 and Figure 2), combined with AMR exposure assessment data showing most women report past non-occupational exposure rather than occupational exposures (see Table 2), suggests research is needed to assess the potential ongoing risk of non-occupational asbestos exposure. This will ensure adequate controls can be implemented for these types of exposures with the aim of further reducing the rate at which Australian women are being diagnosed with mesothelioma, and preventing all Australians from developing asbestos-related diseases from exposure in non occupational settings.

Global burden of disease study[8]

While data limitations, including a lack of exposure data, still impact our ability to accurately diagnose asbestos-related diseases, we can refer to estimates of total asbestos-related disease burden in Australia by analysing data that are reported through the Global Burden of Disease Study. These have most recently been reported through the Global Burden of Disease Study 2021 (*GBD Study 2021*), published in the Lancet in May 2024.[9]

From data obtained through the previous Global Burden of Disease Study 2019 (*GBD Study 2019*), there was an estimated increase of around 100 deaths in Australia from asbestos-related diseases between 2018 and 2019, with no further estimates released at that time.[10] The latest study reports a smaller increase in the estimated number of deaths from asbestos-related diseases in Australia, up from approximately 4,449 in 2019 to approximately 4,469 in 2021.

Using data from the *GBD Study 2021*, the attributable burden of disease related to numerous risk factors was estimated between 1990 to 2021. A notable shift was observed in global health challenges between 2000 to 2021, as measured by changes in disability-adjusted life years (DALYs), i.e. the number of years lost due to ill-health, disability, or early death. While there was a marked global decline in burden of disease attributable to behavioural risks (decrease of 20.7% [95% CI 13.9–27.7]) and environmental and occupational risks (decrease of 22.0% [15.5–28.8]), this was coupled with a 49.4% (95% CI 42.3–56.9) increase in DALYs attributable to metabolic risks, all reflecting ageing populations and changing lifestyles on a global scale.[11] This may account for the smaller increase in asbestos-related diseases deaths due to occupational risks (like historical asbestos exposure in Australia) as the cause.

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8 Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2021 (GBD 2021) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2024. Available from https://vizhub.healthdata.org/gbd-results/

9 Findings from the Global Burden of Disease Study 2021 Murray, Christopher J L, The Lancet, Volume 403, Issue 10440, 2259 – 2262. Available from https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)00769-4/abstract.

10 Institute for Health Metrics and Evaluation (IHME), 2020. Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. University of Washington: Seattle, United States.

11 Global burden and strength of evidence for 88 risk factors in 204 countries and 811 subnational locations, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021. Brauer, Michael et al. The Lancet, Volume 403, Issue 10440, 2162 – 2203. Available from https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)00933-4/fulltext.

As noted, 4,469 (95% uncertainty interval [95% UI] 3,550–5,310) Australians died from asbestos-related diseases in 2021 (see Table 3). These deaths were attributed to past occupational asbestos exposure. Although non-occupational exposure to asbestos is not reported separately through the GBD studies, a small proportion of estimated deaths from asbestos-related diseases are likely to have involved non-occupational exposure.[12]

Table 3: Number of deaths from asbestos-related diseases among men and women, Australia in 2021

Asbestos-related disease	Men		Women		People	
	Estimate	Uncertainty	Estimate	Uncertainty	Estimate	Uncertainty
Lung cancer	2,731	1,979–3,458	557	348–791	3,289	2,410–4,062
Mesothelioma	703	639–755	136	114–155	840	753–907
Asbestosis	155	132–179	5	3–6	160	137–184
Ovarian cancer	N/A	N/A	138	66–220	138	66–220
Cancer of the larynx	41	24–60	2	1–3	43	26–62
Total	**3,630**	**2,855–4,342**	**839**	**564–1,112**	**4,469**	**3,550–5,310**

Source: GBD Results tool Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2021 (GBD 2021) Results.

Australia's death rate from all asbestos-related diseases combined was around 17 (95% UI 14–21) deaths per 100,000 in the population (28 [95% UI 22–34] deaths per 100,000 for men and 6 [95% UI 4–9] deaths per 100,000 for women). This was the 11th highest death rate from asbestos-related diseases among all countries and territories included in the *GBD Study 2021*.

Australia's death rates are also among the highest in the world for asbestos-related lung cancer (21 [95% UI 16–27] deaths per 100,000 for men and 4 (95% UI 3–6) deaths per 100,000 for women in 2019) and the third highest for mesothelioma (around 3 [95% UI 3–4] deaths per 100,000 of the population).

[12] Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2021 (GBD 2021) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2024. Available from https://vizhub.healthdata.org/gbd-results/

Based on the *GBD Study 2021*, the estimated proportion of deaths due to asbestos-related diseases that is specifically attributable to asbestos exposure varied from between 12% (95% UI 6–19) for ovarian cancer and 100% for asbestosis (see Table 4).

Table 4: Number of deaths from diseases and proportion attributable to asbestos exposure (2021)

Asbestos-related disease	Deaths attributable to asbestos exposure		Total deaths from the disease		Proportion of total deaths attributable to asbestos exposure	
	Estimate	Uncertainty	Estimate	Uncertainty	Estimate	Uncertainty
Lung cancer	3,289	2,410–4,062	10,246	9,132–11,290	32%	25–38%
Mesothelioma	840	753–907	850	766–917	99%	98–99%
Asbestosis	160	137–183	160	137–183	100%	100–100%
Ovarian cancer	138	66–220	1,140	972–1,256	12%	6–19%
Cancer of the larynx	43	26–62	234	205–262	18%	11–26%

Source: GBD Results tool Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2021 (GBD 2021) Results.

The number of deaths due to asbestos-related diseases in Australia increased for both men and women between 1990 and 2021 (the period currently covered by *GBD Study 2021*). Although most people who die from asbestos-related diseases in Australia are men, data shows that the proportion of asbestos-related disease deaths in women has increased over the last 30 years (see Table 5).

Table 5: Number and proportion of total deaths from asbestos-related diseases in men and women between 1990 and 2021

Year	Men		Women		People
	Estimate	Uncertainty	Estimate	Uncertainty	Estimate
1990	2,519	88.8%	317	11.2%	2,835
2000	2,742	86.2%	439	13.8%	3,181
2010	3,079	80.4%	750	19.6%	3,830
2020	3,352	80.9%	790	19.1%	4,142
2021	3,630	81.2%	839	18.8%	4,469

Source: GBD Results tool Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2021 (GBD 2021) Results.

Reviewing evidence about asbestos as a cause of cancer

ASSEA has continued to review evidence from the World Health Organization's (WHO) International Agency for Research on Cancer (IARC) about asbestos as a cause of cancer, including whether there is sufficient evidence to establish asbestos as a cause of other cancers in addition to mesothelioma, lung cancer, cancer of the ovary and cancer of the larynx.

Through its Monograph program, the IARC prepares scientific reviews and evaluations of evidence on the carcinogenicity of a wide range of agents and assesses the strength of the available evidence for establishing a causal association between exposure to the agent and human cancer.

The most recent evaluation of the carcinogenicity of asbestos was through IARC Monograph Volume 100C: Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite and Anthophyllite), which was last updated in 2012. This monograph identified that there is sufficient evidence to confirm that asbestos in all forms causes cancer and that it causes lung cancer, mesothelioma, ovarian cancer and cancer of the larynx.[13]

While the IARC also observed associations in this monograph between asbestos exposure and cancer of the pharynx, stomach and colorectum, the evidence was assessed to be limited and therefore not sufficient to establish a causal relationship to these cancers.[13]

The IARC Advisory Group meet periodically to review current evidence around carcinogenicity and establish a list of priorities for updating or developing new monographs. At their most recent meeting in March 2024, the Advisory Group recommended that the re-evaluation of asbestos is warranted and is of high priority during 2025–2029. The justification for this focuses upon the increased strength of evidence since the last Advisory Group review, for the causal association between asbestos and cancer in organs and tissues outside of the lungs, particularly in the digestive tract. There was also a corresponding improvement in the strength of evidence relating to the plausibility of exposure within the digestive tract.[14]

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[13] International Agency for Research on Cancer (IARC). Arsenic, Metals, Fibres and Dusts. Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 100C: Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite and Anthophyllite). 2012. Available from http://publications.iarc.fr/120

[14] International Agency for Research on Cancer. Report of the Advisory Group to Recommend Priorities for the IARC Monographs during 2025–2029. Available from https://monographs.iarc.who.int/wp-content/uploads/2024/11/AGP_Report_2025-2029.pdf.

2.2 Asbestos safety research: understanding the current risk posed by low-level asbestos exposure

As identified in the previous progress report, available evidence indicates that Australians may continue to develop asbestos-related disease from exposure to legacy asbestos occupationally and non-occupationally, without targeted action to prevent it. Uncertainty still remains about how to quantify and control health risk associated with exposure to legacy asbestos, which may occur at relatively low levels compared to past occupational exposures.[15]

During the Phase 2 Asbestos National Strategic Plan, ASSEA has continued to collaborate with experts and conducted a preliminary review of evidence, to form a better understanding of the health risk associated with low-level asbestos exposure. Through these actions ASSEA has identified that much of the available evidence has been developed with reference to past occupational exposures, and that more Australian data is needed to inform characterisation of the risk, particularly from cumulative low-level exposures, and to enable effective controls. Furthermore, lack of exposure data, across all settings, hinders the accurate diagnosis and reporting of asbestos-related disease in Australia, having implications for effective public policy.

Several key themes have emerged on disease attribution, asbestos exposure limits and measuring low-level exposure and are discussed below. Detailed work on the disease attribution theme has been initiated, as it provides additional context surrounding the importance of this research topic. The themes of asbestos exposure limits and measuring low-level exposure are summarised only, as these will be the focus of targeted research by ASSEA in the Phase 3 Asbestos National Strategic Plan.

[15] The Past, Present and Future of Asbestos-Related Diseases in Australia: What Are the Data Telling Us? Available from https://www.mdpi.com/2071-1050/15/11/8492.

Disease attribution

Disease attribution has emerged as an important factor linked to the topic of low-level asbestos exposure, since the assessment of asbestos exposure levels can influence the successful attribution and accurate diagnosis of asbestos-related diseases.

Through ASSEA's initial evidence review covering the Australian and international context, it has been identified that detection and recording of health effects due to asbestos exposures is important from scientific, clinical, public health, and medico-legal perspectives for the accurate diagnosis and attribution of asbestos to the development of disease.[16 17 18 19] This is critical given that some asbestos-related diseases can also be caused by other agents, making the attribution of asbestos exposure as the sole cause challenging.

A series of expert consensus statements have been developed over time, aiming to support the recognition, attribution, management and elimination of asbestos-related diseases. In the development of these consensus statements, experts have acknowledged that even brief, low-level exposure to asbestos can cause mesothelioma, and that cumulative asbestos exposure at low levels can be sufficient to cause lung cancer.[16 17 18]

The international and Australian consensus statements recommend that the determination of exposure levels is an important factor in disease attribution. The Australian consensus statement also recommends that further information about different disease settings – for example occupational exposures and non-occupational exposures, and exposure conditions such as level and duration of exposure – is needed.[16 17 18]

The successful attribution of asbestos to the development of disease is also influenced by evidence identifying which diseases are known or suspected to be caused by asbestos.

Exposure to asbestos fibres is known to cause asbestosis, asbestos-related pleural abnormalities such as pleural plaques, mesothelioma and cancer of the lung, larynx and ovary.[20] As depicted in Table 6, other agents in addition to asbestos are also known to cause lung cancer, ovarian cancer and laryngeal cancer. Malignant pleural mesothelioma (the most common type of mesothelioma) is directly attributable to asbestos exposure and asbestos exposure is widely accepted as the main of this disease.[21] Sufficient evidence has also accumulated to establish a causal relationship between mesothelioma and other agents such as ionizing radiation and the mineral erionite.

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16 Asbestos, asbestosis, and cancer: the Helsinki criteria for diagnosis and attribution, Scandinavian Journal of Work, Environment & Health, Aug 1997. Available from https://www.sjweh.fi/article/226.

17 Asbestos, Asbestosis, and Cancer Helsinki Criteria for Diagnosis and Attribution 2014, Finnish Institute of Occupational Health, Helsinki 2014. Available from https://www.ttl.fi/sites/default/files/2023-04/asbestos-asbestosis-and-cancer-book.pdf.

18 The Diagnosis and Attribution of Asbestos-related Diseases in an Australian Context: Report of the Adelaide Workshop on Asbestos-related Diseases. October 6–7, 2000 (researchgate.net).

19 Chrysotile Asbestos Priority Existing Chemical No. 9 Full Public Report, National Industrial Chemicals Notification and Assessment Scheme. February 1999. Available from https://www.industrialchemicals.gov.au/sites/default/files/PEC9-Chrysotile-asbestos.pdf.

20 International Agency for Research on Cancer (IARC). Arsenic, Metals, Fibres and Dusts. Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 100C: Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite and Anthophyllite). 2012. Available from http://publications.iarc.fr/120

21 NCCN Guidelines for Mesothelioma: Pleural, Version 1. 2024. Available from https://pubmed.ncbi.nlm.nih.gov/38503043/.

As noted, while previous evaluations of evidence conducted by IARC only identified an association between asbestos exposure and cancer of the pharynx, stomach and colorectum,[22] the IARC advisory group have recently announced that evidence for causal association between exposure to asbestos and cancer in organs and tissues outside of the lungs, particularly in the digestive tract, now appears to have strengthened.[23] A re-evaluation of the evidence has therefore been prioritised to occur within the next five years, to determine whether it is sufficient to support the presence of a causal relationship to more cancers than has been established currently. Depending on the outcome of that evaluation, the IARC list of classifications by cancer sites with sufficient or limited evidence in humans, which is the source of the information presented in Table 6, may also require updating.

Table 6: Malignant diseases known (sufficient evidence) and possibly (limited evidence) caused by asbestos (fibre inhalation) and other agents between 1990 and 2021

Malignant disease (Cancer)[24]	Cause	
	Sufficient evidence in humans	**Limited evidence in humans**
Mesothelioma (pleural, peritoneum, and other)	Asbestos + 4 other agents	-
Lung	Asbestos + 31 other agents	19 agents
Larynx	Asbestos + 5 other agents	6 agents
Ovary	Asbestos + 2 other agents	2 agents
Colorectal (colon and rectum combined)	4 agents	Asbestos + 5 other agents
Pharynx (all combined)	4 agents	Asbestos + 4 other agents
Stomach	4 agents	Asbestos + 8 other agents

Source: Adapted from List of classifications by cancer sites with sufficient or limited evidence in humans, IARC Monographs Volumes 1–135

Additional research is needed to improve disease attribution, for greater detection and recording of the health effects of asbestos exposures, in order to improve public policy.

[22] International Agency for Research on Cancer (IARC). Arsenic, Metals, Fibres and Dusts. Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 100C: Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite and Anthophyllite). 2012. Available from http://publications.iarc.fr/120

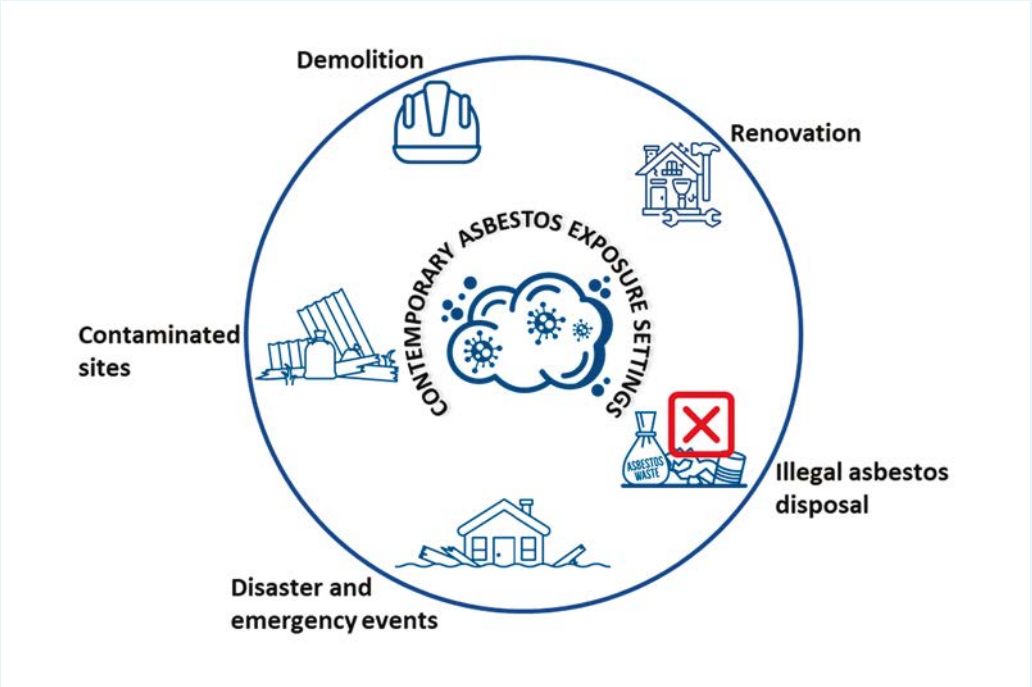
[23] International Agency for Research on Cancer. Report of the Advisory Group to Recommend Priorities for the IARC Monographs during 2025–2029. Available from https://monographs.iarc.who.int/wp-content/uploads/2024/11/AGP_Report_2025-2029.pdf.

[24] Some cancer sites currently identified as having only limited evidence in humans for a casual association to asbestos, will be re-evaluated by IARC as a priority within the next five years.

Asbestos exposure limits

The definition of low-level asbestos exposure is also critical in building our understanding of contemporary asbestos exposure risks. Figure 3 demonstrates potential sources for contemporary asbestos exposure settings, all of which can cause low levels of exposure, but not necessarily exclusively.

Figure 3: Potential sources of low-level exposure



Source: Frangioudakis Khatib G, Collins J, Otness P, Goode J, Tomley S, Franklin P and Ross J (2023). Australia's Ongoing Challenge of Legacy Asbestos in the Built Environment: A Review of Contemporary Asbestos Exposure Risks. Sustainability **2023**, *15*(15), 12071.

There is no minimum threshold level of exposure below which there is no risk of developing an asbestos-related disease.[25] Occupational exposure standards have historically been defined under various laws in Australia and overseas, to control asbestos exposure and eliminate or minimise health risk in the workplace. Exposure standards reflect the outcome of human health risk assessment that incorporates information from hazard identification and assessment, dose-response assessment for given situations, and exposure assessment. A risk characterisation is then carried out to provide quantitative estimates of risk for ranges of exposure.[26] Biological variation and other situational factors can contribute to adverse health effects below occupational exposure standards.[27]

[25] World Health Organization (WHO). Towards the elimination of asbestos-related diseases in the WHO European Region: assessment of current policies in Member States, 2014. Available from https://www.who.int/europe/publications/i/item/9789289050791.

[26] Environmental Health Risk Assessment—Guidelines for assessing human health risks from environmental hazards. Available from https://www.health.gov.au/sites/default/files/documents/2022/07/enhealth-guidance-guidelines-for-assessing-human-health-risks-from-environmental-hazards.pdf.

[27] Conducting a Human Health Risk Assessment | United States EPA. Available from https://www.epa.gov/risk/conducting-human-health-risk-assessment.

With reference to occupational exposure standards, exposure limits establish a statutory maximum upper limit of exposure that has been agreed should not be exceeded under given circumstances. They do not identify the dividing line between a healthy and unhealthy environment and are not considered to represent an acceptable level of exposure for the general population.[28] [29]

For ASSEA's future research into the effects of cumulative, low-level asbestos exposure, this will be broadly defined as exposure to asbestos at levels that are at, or below, the current Australian *Exposure limits* adopted under *work health safety laws*, and *environment protection laws*, and which may occur in any setting, both occupationally and non-occupationally.[30] [31] [32]

Measuring low-level exposure

Finally, ASSEA's preliminary review of evidence also identified that existing methods for measuring asbestos exposure may not be independently capable of providing accurate and robust data on lower concentration levels of airborne asbestos fibres, and this may need to be overcome through application of multiple methods.

ASSEA proposes to carry out targeted research of the various techniques for measuring low-level asbestos exposure in Australia, including their limits of detection, and will aim to test the application of these methods through national field studies.

Current standard methods for monitoring airborne contaminants and current occupational exposure standards will provide a reference point for the investigation of low-level exposures, that might be occurring in various settings due to legacy asbestos.

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[28] Australian Government, Workplace Exposure Standards for Airborne Contaminants. Updated January 2024. Available from https://www.safeworkaustralia.gov.au/doc/workplace-exposure-standards-airborne-contaminants-2024.

[29] Interpretation of Workplace exposure standards for airborne contaminants, September 2024. Available from https://www.safeworkaustralia.gov.au/sites/default/files/2024-09/guidance-interpretation-workplace-exposure-standards-airborne-contaminants-revised-sep24.pdf.

[30] Currently, the Australian workplace exposure standard for all forms and combinations of asbestos is a time weighted average of 0.1 fibres per millilitre of air for all forms of asbestos, confirmed in January 2024. See workplace_exposure_standards_for_airborne_contaminants_-_18_january_2024.pdf (safeworkaustralia.gov.au).

[31] Following a review of workplace exposure limits for airborne contaminants, Australia's WHS ministers have agreed to the term workplace exposure *limits* (WEL), to replace the previous term, workplace exposure *standards* (WES). Most exposure limits (including for asbestos) remain unchanged from the review, however the new document, Workplace exposure limits for airborne contaminants incorporating relevant amendments, will be added to workplace health and safety laws with a start date of 1 December 2026.

[32] Exposure limits for asbestos are also defined under Australian environment protection laws. See Federal Register of Legislation - National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1).

2.3 Medical research funding for asbestos-related diseases

The ASSEA remit does not include medical research of asbestos-related diseases. However, the following analysis is provided as a baseline for future tracking, as will be required by all governments in the Phase 3 Asbestos National Strategic Plan.

Cancer research funding in Australia

Cancer research funding includes funds for research on asbestos-related diseases. Triennial audits of cancer research funding in Australia are conducted by Cancer Australia (CA), the lead cancer control agency of the Australian Government. The audits are designed to provide evidence to inform ongoing medical and other research funding priorities.

The third CA national audit of cancer research funding, Cancer Research in Australia: an overview of funding for cancer research projects and programs in Australia 2012 to 2020 (the CA audit), was published in January 2023. The CA audit outlines national patterns of funding provided to cancer research projects and programs, for the years 2012–2020, also allowing for trend analysis over six triennia covering the period 2003–2020. While this data relates to previous reporting years of the Asbestos National Strategic Plans, having only recently been published (in the current reporting period) it provides a meaningful baseline for future benchmarking.

Sources of cancer research funding in Australia

The CA audit revealed that $2.12B of funding was allocated to cancer research between 2012–2020 and a total of $3.43B across all six triennia (2003–2005 to 2018–2020). The Australian Government was the largest funding body of cancer research projects and programs.

Focusing on the most recent triennia (2018–2020), there was approximately $0.94B in cancer research funding in Australia. Of this, 55% ($518M) was funded by the Australian Government, with around 46% of this from the National Health and Medical Research Council (NHMRC), and the remainder from other Australian Government sources. Funding was also provided by:

- state and territory governments, 13% or $124.8M
- cancer foundations, 10% or $96.6M
- cancer councils, 7% or $66.4M
- medical research institutes, hospitals and foundations, 7% or $64.9M
- international funders, 2.7% or $25.2M
- universities, 1.9% or $18.1M
- other sources, 1.8% or $17.7M
- philanthropic funders, 0.1% or $0.9M.

Analysis of the national distribution of cancer research funding shows that the majority of funding has been distributed across NSW, Victoria and Queensland. Further, total funding to cancer research has increased for all states and territories, except Tasmania.

Categories of cancer research funding in Australia

Cancer research funding is analysed using several different approaches. The most relevant categories for mapping asbestos-related disease research expenditure are described below and expanded upon in later sections. Patterns of funding – direct funding reflecting actual dollar amounts and proportional funding reflecting amounts relative to other funding categories and tumour types – are also analysed.

The CA audit utilises Common Scientific Outlines (CSOs) to assess patterns of cancer research funding, according to categories defined through the International Cancer Research Partnership (ICRP), an internationally recognised system for classifying cancer research. The CSO categories of cancer research assessed through the CA audit are:

- *Treatment*
- *Biology*
- *Early Detection, Diagnosis and Prognosis*
- *Aetiology* (i.e. causation)
- *Cancer Control, Survivorship and Outcomes*
- *Prevention*

Cancer research funding is also categorised according to twenty-two tumour types, and twelve tumour streams (groups of similar tumour types).

Research funding directed to several individual tumour types includes the asbestos-related diseases, cancer of the *Ovary* and *Lung*. Mesothelioma is grouped with *Lung cancer* in the analysis of individual tumour types.

Research funding to the several tumour types that are known to potentially be caused by asbestos are also analysed as a component of the following different tumour streams:

- *Gynaecological cancers*, which includes the asbestos-related disease ovarian cancer
- *Head and neck cancers*, which includes the asbestos-related disease laryngeal cancer
- *Lung cancers including mesothelioma*, both asbestos-related diseases.

Direct and proportional allocation of cancer research funding

By CSO category

The CA audit showed that there was an increase in direct funding for all CSO categories between the first and last triennia covered in the audit. *Treatment* research received the most consistent year-on-year funding increase, from $55.1M in 2003–2005 to $394M in 2018–2020. In contrast, *Prevention* research only increased very slightly from $15.2M in 2003–2005, to $21.7M in 2018–2020.

Analysis of proportional funding to each of the CSO categories shows that the highest proportion of research funding has typically been assigned to *Biology* research, *Treatment* research, and *Early Detection, Diagnosis and Prognosis* research. While this is still the case, the proportion of funding allocated to *Biology* research in the period 2011–2020 did decrease relative to the other categories.

Biology research received 39% of funding in 2003–2005 ($45.6M) and 18% in 2018–2020 ($107M). *Treatment* research received 22% of funding in 2003–2005 ($248M) and 41% in 2018–2020 ($248M). *Early Detection, Diagnosis and Prognosis* research received 13% of funding in 2003–2005 ($14.9M) and 23% in 2018–2020 ($137M).

The lowest proportion of funding has typically been allocated to *Prevention* research which received only 3% of funding across all triennia ($4.0M in 2003–2005 and $16.5M in 2018–2020). *Cancer Control, Survivorship and Outcomes* research was also consistently allocated a proportionally low amount of funding across all triennia, receiving no more than 9% of funding at any time ($10.5M in 2003–2005 and $54.4M in 2018–2020).

By tumour type

The CA audit showed that there was an increase in direct funding for single tumour type research and programs in all the twenty-two tumour types that were assessed. Regarding proportional allocation of funding, while overall this fluctuated, for the *Lung cancers including mesothelioma* tumour type, this increased from 2% to 6%.

By asbestos-related diseases (Lung cancers including mesothelioma, Ovarian cancer and Laryngeal cancer)

Table 7 outlines the direct and proportional funding amounts allocated for cancer research projects and programs to single tumour types and tumour streams that include cancers known to potentially be caused by asbestos. As shown, direct funding to cancer of the *Ovary* increased from $2.2M in 2003–2005 to $31.2M in 2018–2020, and the proportion of funding to cancer of the *Ovary* compared to other tumour types also increased from 2% to 6%. Direct funding to *Lung cancers including mesothelioma*, also increased from $2.5M in 2003–2005 to $30.9M in 2018–2020, and the proportion of funding compared to other tumour types also increased from 2% to 6%. Direct funding to the tumour type cancer of larynx was not reported, instead this is captured to some extent via the reporting of direct funding amounts allocated to the tumour stream *Head and Neck* cancers, which includes cancer of the larynx.

Direct funding to the tumour stream *Gynaecological cancers* increased from $5.2M in 2003–2005 to $44.0M in 2018–2020, with the proportion of total funding allocated to this tumour stream also increasing, from 4.7% to 7.8%. Direct funding to the tumour stream *Lung cancers including mesothelioma*, also increased from $2.5M in 2003–2005 to $32.0M in 2018–2020. The proportion of total funding allocated to this tumour stream also increased, from 2.3% to 5.7%. For the tumour stream *Head and Neck* cancers, funding increased from $2.2M in 2003–2005 to $31.2M in 2018–2020, and the proportion of total funding to this tumour stream decreasing slightly from 2% to 1.6% of total funding to single tumour streams.

Table 7: Direct funding, number of research projects and programs, and proportional funding to single tumour types and tumour streams that include cancers potentially caused by asbestos, 2003–2005 to 2018–2020

Tumour type	2003–2005	2006–2008	2009–2011	2012–2014	2015–2017	2018–2020
Ovary						
funding	$2.2M	$7.2M	$11.7M	$16.4M	$25.4M	$31.2M
no. of projects/ programs	20	31	42	62	73	84
% of funding	2%	4%	4%	5%	6%	6%
Lung and Mesothelioma						
funding	$2.5M	$7.8M	$16.3M	$14.8M	$21.1M	$30.9M
no. of projects/ programs	22	48	78	69	81	102
% of funding	2%	4%	5%	4%	5%	6%
Tumour Stream	**2003–2005**	**2006–2008**	**2009–2011**	**2012–2014**	**2015–2017**	**2018–2020**
Gynaecological						
funding	$5.2M	$13.5M	$19.3M	$25.6M	$35.6M	$44.0M
no. of projects/ programs	38	60	75	98	107	116
% of funding	4.7%	6.2%	5.5%	7.3%	8.8%	7.8%
Lung cancers						
funding	$2.5M	$7.8M	$16.3M	$14.8M	$21.4M	$32.0M
no. of projects/ programs	22	48	78	69	83	106
% of funding	2.3%	3.6%	4.6%	4.3%	5.3%	5.7%
Head and Neck						
funding	$2.2	$2.8	$3.8	$4.1	$4.5	$9.0
no. of projects/ programs	21	17	23	21	31	42
% of funding	2.0%	1.3%	1.1%	1.2%	1.1%	1.6%

Source: Adapted from Tables 7.1 and 8.1 of the CA audit

Cancer research funding to asbestos-related diseases (Lung cancers including mesothelioma and Cancer of the ovary) by CSO category

Via the CA audit, the patterns of direct and proportional funding across each of the CSO categories have been assessed, showing direct funding amounts have increased in most categories across the triennia.

For *Lung cancers including mesothelioma* (see Table 8) and *Cancer of the ovary* (see Table 9), the highest proportions of direct research funding were for the CSO categories of *Early Detection, Diagnosis and Prognosis*; *Treatment*; and *Cancer Control, Survivorship and Outcomes*, reflecting a similar pattern across all triennia. Notably, *Prevention* research received the lowest level of funding across the triennia. The proportion of funding by CSO category to cancer of the larynx was not reported separately.

Table 8: Pattern of proportional funding by CSO category for Lung cancers including mesothelioma research projects and programs, 2003–2005 to 2018–2020

Triennium	Biology	Aetiology	Prevention	Early Detection, Diagnosis and Prognosis	Treatment	Cancer Control, Survivorship and Outcomes Research
2003–2005	17%	12%	2%	44%	15%	10%
2006–2008	13%	15%	8%	24%	24%	6%
2008–2011	17%	4%	4%	33%	28%	9%
2012–2014	24%	13%	0%	22%	34%	7%
2015–2017	15%	15%	0%	28%	27%	15%
2018–2020	8%	9%	0%	37%	33%	14%

Source: Adapted from Figure 9.4 of the CA audit

Table 9: Pattern of proportional funding by CSO category for Cancer of the ovary research projects and programs, 2003–2005 to 2018–2020

Triennium	Biology	Aetiology	Prevention	Early Detection, Diagnosis and Prognosis	Treatment	Cancer Control, Survivorship and Outcomes Research
2003–2005	33%	9%	3%	33%	0%	22%
2006–2008	18%	16%	2%	49%	7%	8%
2008–2011	23%	10%	0%	43%	9%	7%
2012–2014	18%	16%	2%	40%	21%	4%
2015–2017	14%	6%	1%	33%	27%	18%
2018–2020	5%	3%	1%	25%	40%	26%

Source: Adapted from Figure 9.7 of the CA audit

Funding to cancer clinical trials for asbestos-related diseases

Cancer Australia report that in the period 2012–2020, there were 419 clinical trials funded through cancer research projects and programs at a cost of $315M, and that lung cancer (including mesothelioma) and ovarian cancer were among the top ten tumour types investigated through clinical trials. They also identify that there were fewer clinical trials funded for lung cancer than might have been anticipated given it was the most burdensome tumour type but had only the fifth highest number of clinical trials reported to the audit.

Key observations

- The attribution of asbestos exposure as a causal factor in the development of a disease is necessary to support informed asbestos-related policy responses, because some asbestos-related diseases are also known to be associated with other causes, in addition to asbestos.
- Past regulatory actions aimed at controlling risk from asbestos exposure appear to have had more impact towards reducing disease among men, who have typically reported that their past exposures have occurred through their occupation. It would appear past actions have had less impact to reduce disease among women, who typically report their past asbestos exposures to have occurred in non-occupational settings.
- More research is needed to assess the potential ongoing risk of non-occupational asbestos exposure, to ensure evidence-based controls can be implemented for these types of exposures, with the aim of further reducing the rate at which Australians, and particularly women, are being diagnosed with mesothelioma, and to prevent all Australians from developing any asbestos-related disease from exposure in non-occupational settings.

Next steps

- ASSEA's research into low-level asbestos exposure will continue, especially at levels that are at, or below the current exposure limits defined under work health safety and environmental protection laws, and that might occur in any setting, both occupationally and non-occupationally.
- Further research is required into the circumstances surrounding low-level asbestos exposure in Australia, which may provide information to support accurate disease attribution and diagnosis.
- As well as increasing asbestos safety research, additional funding for asbestos-related disease research and asbestos advocacy and support groups is needed to improve diagnostic, therapeutic and other treatment methods. For example, improved clinical guidelines to increase in the number of medical and health professionals who are trained in early diagnosis of asbestos-related diseases (and therefore able to respond and refer appropriately) will lead to improved reporting of asbestos-related diseases.

3. Asbestos awareness

The aim of Priority 1 is to improve asbestos awareness with governments and community bodies collaborating to provide trusted, practical, easily understood, and accessible information about asbestos risk in homes, workplaces, and the environment. Target 1 relates to this priority.

Target 1

Increased awareness of the health risks of ACMs and where to source information among the following cohorts:

- all tradespersons whose work brings them into contact with ACMs
- all workers in workplaces with ACMs
- 80% of homeowners and occupiers
- 80% of property managers and real estate agents.

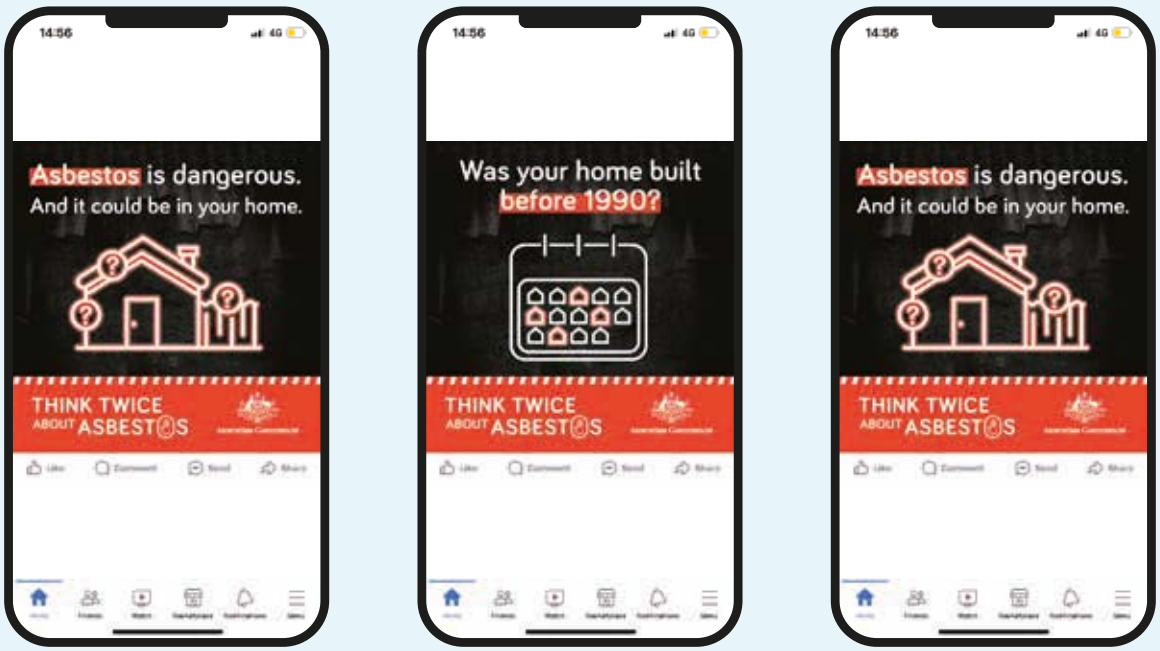
3.1 Asbestos awareness campaigns

National Asbestos Awareness Campaign: *Think Twice About Asbestos*

In November 2022, ASSEA launched a paid advertising campaign to improve asbestos awareness and influence behaviour to prevent exposure to asbestos fibres. The campaign urged Australians to "Think Twice About Asbestos", aiming to challenge complacency by reminding the Australian community that the danger from asbestos is far from over. This was the first asbestos safety campaign of this scale to be delivered nationally in Australia. It consisted of two phases of advertising delivered in November to December 2022, and again in March to April 2023 – known to be peak periods for undertaking home improvement projects and renovations.

The campaign was based on the distinctive red and black campaign materials (see Figure 4) that proved to be successful during the 2021 National Asbestos Awareness Week.

Figure 4: Examples of National Asbestos Awareness Campaign materials



The key target audiences were 'Do-It-Yourself' (DIY) home renovators and tradespeople, as identified in formative research in 2021. Data from the *National Residential Asbestos Heatmap* (see Chapter 4.3) was used to enhance campaign targeting.

The campaign 'call to action' was to visit ASSEA's website for more information, allowing click-through to the dedicated 'mini-sites' for homeowners and trades audiences, as well as translated fact sheets for culturally and linguistically diverse (CALD) audiences. Advice on media strategy and media buying services were provided by Universal McCann, master media buyer for the Australian Government.

The campaign ran across social media, video, Bunnings magazine and digital display. Media performance exceeded Australian Government advertising benchmarks across all measures.

Based on the strong reach and volume achieved by the campaign, ASSEA redeployed the campaign in FY 2023–24 with minor updates. In re-using campaign materials, ASSEA was able to increase the budget for media placement and increase the number of channels through which to reach the target audiences.

The FY 2023–24 campaign was again delivered in two bursts during November to December 2023 and March to April 2024, using a video-led strategy and two new channels – radio and paid search.

Despite the overall success of the campaigns (see Table 10), tradespersons proved costly to target and therefore new strategies will be used to reach this audience in future.

Table 10: Summary of National Asbestos Awareness Campaign results

Channel	FY 2022–23	FY 2023–24
Overview	Paid media across **4 channels** **Display-led** strategy	Paid media across **6 channels** **Video-led** strategy
Social media	Social media impressions served: **14.5 million** Clicks through to website: **23,000** Click through rate: **0.16%**	Social media impressions served: **24.5 million** Clicks through to website: **22,000** Click through rate: **0.09%**
Video	Completed views: **2.6 million** Clicks through to website: **6,000** Click through rate: **0.2%**	Completed views: **7.3 million** Clicks through to website: **64,000** Click through rate: **0.7%**
Print	Bunnings magazine – readership up to **1.8 million** at each campaign burst.	
Translated campaign materials	Arabic, Vietnamese, Simplified Chinese, Traditional Chinese. Korean was added for the FY 2023–24 campaign.	
	Impressions served: **20.0 million** Clicks through to website: **19,200**	Impressions served: **31.8 million** Clicks through to website: **31,000**
Regional radio	*Not used*	Radio spots achieved: **791**
Paid search	*Not used*	Delivered click-throughs at around twice the rate anticipated, resulting in around **9,300 visits** to the website.

National Asbestos Awareness Week: 2022 and 2023

National Asbestos Awareness Week (NAAW) is observed in the last week of November each year.

Coinciding with the launch of the National Asbestos Awareness Campaign for 2022 and 2023, ASSEA developed a campaign pack which included print and social media assets, a template media release and newsletter content that stakeholders could download and tailor to suit their own context. The campaign pack was designed to widely promote NAAW, while maintaining recognisable imagery and consistent messaging. ASSEA also engaged a public relations agency to enhance media coverage.

In both 2022 and 2023, ASSEA provided financial support to participating asbestos-related disease advocacy and support groups for using NAAW campaign resources and partnering in the delivery of the campaign (see Figure 5). The aim was to further boost campaign reach and engagement (see Table 11) during NAAW.

Figure 5: Examples of NAAW social media assets used by advocacy and support groups

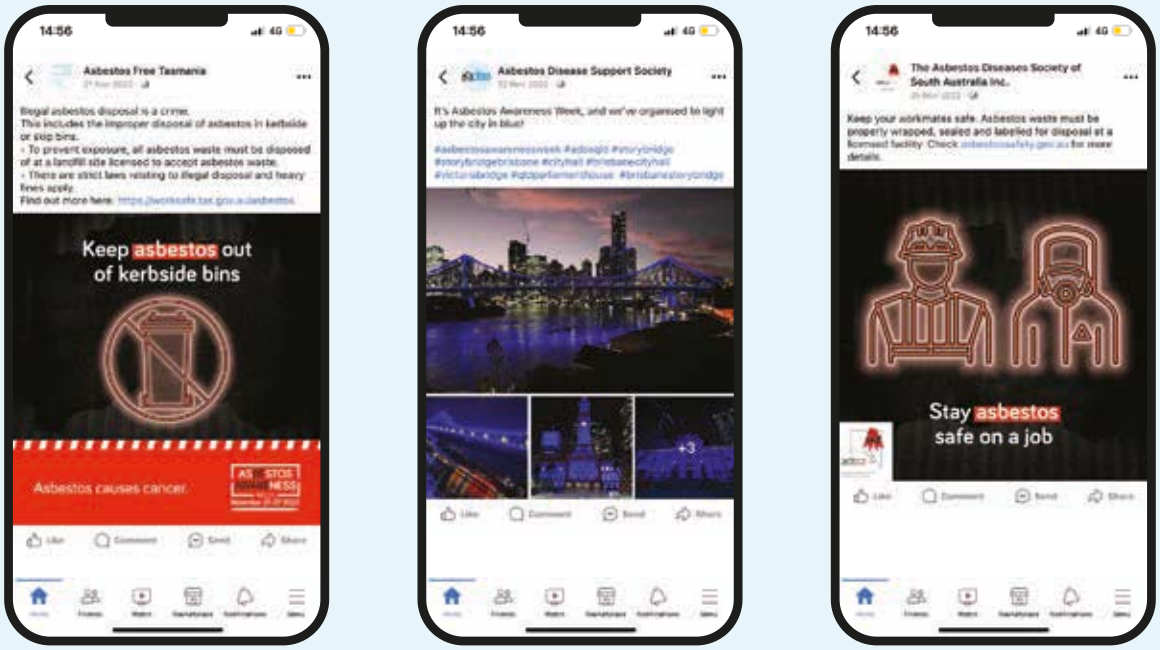


Table 11: Summary of NAAW campaign activity

Activity	NAAW 2022 (21–27 November)	NAAW 2023 (20–26 November)
Downloads of the campaign pack	**392**	**261**
Media placements across radio, print and online news	**142**	**169**
Reach via Asbestos Advocacy and Support Group promotional activities	**293,400**	**351,800**

For NAAW 2022, ASSEA also partnered with the Insurance Council of Australia (ICA) and Local Government NSW (LGNSW) to develop tailored information for the public about asbestos and insurance. Messages focused on increasing awareness that cleaning up after a disaster event is significantly more dangerous and expensive for properties where asbestos is present, and that many consumers may find that their insurance doesn't provide the coverage they need (see Figure 6).

NAAW 2023 provided an opportunity to mark the 20th anniversary of the complete asbestos ban in Australia. A media release and social media tiles (see Figure 7) were developed to acknowledge the progress that has occurred since the ban while also highlighting that a significant amount of ageing asbestos material still remains in our built environment, and that there is an ongoing need for vigilance to prevent exposure to asbestos fibres.

Figure 6: Examples of NAAW assets for the ICA and LGNSW

Figure 7: Social media tiles to mark the 20th anniversary of the complete asbestos ban in Australia

An event was also held at Parliament House in Canberra to commemorate the 20th anniversary and acknowledge the invaluable contributions of those who campaigned and lobbied for the asbestos ban. The event was attended by stakeholders from across government agencies and departments, industry and union representatives, health professionals and researchers, asbestos advocacy and support groups and families of those that have been impacted by asbestos-related diseases.

Delegates at a Parliament House event in Canberra to commemorate the 20th anniversary of the asbestos ban

Examples of jurisdictional asbestos awareness campaigns

Most jurisdictions make good use of the campaign materials developed by ASSEA and focus on compliance campaigns over general asbestos awareness. Some jurisdictions also conduct bespoke awareness campaigns. This usually occurs where they have specific issues to address, tools and opportunities to promote, and the budget to do so.

Victoria

In the reporting period, Victoria ran additional waves of their *Asbestos lurks in more places than you might think* campaign. An educational video was also promoted to help employers, workers and the wider Victorian community understand the invisible dangers of asbestos and how to identify where it can still be found in common areas of residential homes.

The Victorian Asbestos Forum, the Victorian government's interagency asbestos coordination group, hosted "Beyond the Ban: Ending the asbestos legacy" to mark the 20th anniversary of the national asbestos ban in 2003. The event brought together leading experts to reflect on actions of the last 20 years, the challenges that still lie ahead, and what can be done to ensure Victoria – and Australia – becomes asbestos-free. A case study was also used to bring further awareness to the 20th year since the ban of asbestos.

Delegates at the Victorian Asbestos Forum's 'Beyond the Ban: Ending the asbestos legacy' event

New South Wales

During the reporting period, the NSW government also ran the next phases of their *Be Asbestos Ready* campaign. This campaign targets 'people most at risk of exposure' and included DIYers, handy people and tradespeople. Its objective was to raise awareness of the high chance of encountering asbestos, and increasing knowledge in how to safely deal with asbestos during maintenance and renovation works.

A "Free fill – is it worth it?" campaign was conducted in October 2022. The campaign warned landowners that 'free fill' could be contaminated with asbestos, rubble or lead. The campaign was delivered through YouTube, with over 360,000 impressions and 676 estimated clicks.

In FY 2022–23 the NSW Environment Protection Authority (EPA) conducted research to quantify the performance of the EPA's campaign to improve asbestos awareness and planning behaviours among the NSW adult population. A snapshot of the positive 'behaviour change' results include:

- awareness that homes built/renovated before 1990 may contain asbestos has increased from 74% to 81%
- awareness that exposure to asbestos can cause cancer has increased from 60% to 67%
- awareness that having a plan of how to deal with asbestos before starting renovation work can reduce your risk of exposure, increased from 70% to 78%
- the audience noting that they were more likely to plan for asbestos when renovating, increased from 65% to 78%
- the number that recalled the campaign advertising and attributed it to the NSW Government, increased from 35% to 49%.

However, the research also found that confidence in being able to identify and manage asbestos has remained consistently low, with the lowest self-ratings given for handling and disposing of materials. In FY 2023–24, the NSW EPA partnered with the Men's Shed organisation to capture quiz-style video content that highlighted key facts about the dangers of asbestos and how to stay safe around it.[33]

Other asbestos awareness activities in FY 2023–24 focused on promoting the Construct NSW Asbestos Awareness and Safety course for people working with asbestos (see Chapter 3.5). The following videos were developed as part of the course and were released during NAAW 2023. They are currently available on the SafeWork NSW website:

- Fit testing for your respirator
- How to take asbestos samples
- Removing asbestos sheeting safely
- Asbestos finds in a home prior to demolition

Queensland

In FY 2022–23, the Queensland government developed four educational videos to help residents identify where asbestos may be present in their homes. These featured an asbestos expert walking through homes built during periods of peak ACM use in Australia, separately covering the decades of 1950s, 1960s, 1970s and 1980s. These videos are currently available on the Queensland government asbestos website.

Complementing the videos was a series of illustrations that aimed to raise awareness of key asbestos safety messages for homeowners and the community including:

- How asbestos should be disposed of
- What not to do with asbestos

During NAAW 2022, the Queensland Office of Industrial Relations (OIR) led an asbestos safety webinar. Key messages focused on educating householders and tradespeople where asbestos might be found in homes and what they should do to stay safe. More than 900 people watched the live webinar, which covered a range of topics, including the safe management of asbestos in Queensland, the dangers of using high pressure water blasters on asbestos products, and Julie and Don Sager's story of losing their son Adam to mesothelioma.

A further two webinars were held during NAAW 2023. Asbestos safety for businesses was jointly delivered by OIR and the Queensland Department of Environment, Science and Innovation (DESI), covering practical guidance for tradespeople working with asbestos and their environmental obligations for transporting asbestos waste. The second session, Asbestos safety in the community, was jointly delivered by OIR, DESI, Queensland Health, and the Local Government Association of Queensland. This covered where ACMs may be found in homes, DIY removal of up to 10m^2 of non-friable asbestos, transport and disposal of asbestos, and the role of local councils in managing asbestos in the community. More than 470 viewers watched the sessions. These events were supported by a social media campaign, newsletter articles and emails promoting asbestos safety and the webinars, as well as an advertising placement in the construction industry publication, *BuildIT*.

All educational videos, illustrations and webinars continue to be promoted through social media as ongoing resources and are also used at community facing events to provide information and promote asbestos safety.

[33] Facebook post of NSW EPA's partnership with the Men's Shed organisation

3.2 Research on asbestos awareness and behaviour

The Asbestos National Strategic Plan 2021–2022 Progress Report provided the results of a comprehensive survey of asbestos awareness among Australians undertaken in 2022. These data were used to inform the National Asbestos Awareness Campaign strategy and targeting (see Chapter 3.1).

As part of evaluating the FY 2023–24 National Asbestos Awareness Campaign, ASSEA conducted a nationally representative survey of 1,000 Australians in April 2024. One in four respondents claimed to have seen the campaign, with a large majority agreeing that its messages were believable and easy to understand.

The survey indicated that general awareness of asbestos is very high (sitting at 96%) – just 4% reported that they had 'never heard of asbestos' – but the depth of understanding varied widely. It was also identified that the likelihood to undertake DIY and renovation activity has a strong correlation with life stage, especially with starting/raising a family (significantly higher amongst those with youngest child under five years of age) and amongst those aged 35–39 years.

The results also confirmed that asbestos knowledge tends to increase with age, and asbestos safety messaging is perceived to have less personal relevance amongst older generations. These findings support the target age range of 18–54 used for the National Asbestos Awareness Campaign.

In comparison to awareness at the end of the Phase 1 Asbestos National Strategic Plan[34] (where, for example, 84% of general public respondents perceived they were sufficiently informed about asbestos and its related dangers), these most recent data confirm the ongoing improvement in general asbestos awareness at a national scale over the term of the Phase 2 Asbestos National Strategic Plan.

Examples of jurisdictional asbestos awareness and behavioural research

Western Australia

Internal surveys of WA government departments, agencies, local government and government enterprises, each with differing responsibilities for asbestos safety, have been undertaken annually since FY 2021–22. These surveys are optional and have focused on the awareness raising initiatives undertaken and/or the information-sourcing abilities of target audiences as listed in the Phase 2 Asbestos National Strategic Plan, i.e. tradespersons who are likely to encounter ACMs in the course of their work, workers in workplaces with ACMs, owners and tenants of residential premises, as well as property managers and real estate agents of residential premises.

As a snapshot of all findings, in FY 2022–23, awareness in the workplace was higher than for the residential sector (including for property managers and real estate agents) and was aligned with the proportion of awareness raising activities undertaken for each of the target audiences. The main awareness raising activities for all target audiences included signage, guidance material, or on-site induction/training. Overall, awareness and information-sourcing abilities of target audiences have remained stable or increased over time, with impact primarily assessed by observations, improved compliance and increased contact with relevant government entities.

[34] National benchmark surveys of awareness and attitudes to asbestos (2014–2018) | Asbestos and Silica Safety and Eradication Agency

3.3 Guidance material

Guides for communicating about asbestos risk

ASSEA developed the *Guidelines for communicating asbestos risk to the public* and the *Communicating asbestos facts and figures guide* (the guides), to ensure that asbestos information communicated to the Australian public is clear, consistent and evidence based.

The guides were launched as part of National Asbestos Awareness Week in November 2022. ASSEA promoted them through a media release and distribution of a stakeholder pack to communicators in both government and non-government organisations.

The guides were further promoted via a series of paid LinkedIn advertisements in June 2023. The LinkedIn advertising delivered strong results and exceeded Australian Government benchmarks across each ad, when benchmarked off a cost per impression. The total reach of the ads was 124,132, with 246,057 impressions and 878 clicks through to the website to access the guides.

Since the launch of the guides in November 2022 until June 2024, there have been a total of 1,702 downloads from our website.

Action on Illegal Disposal of Asbestos: A Guide for Local Government

ASSEA developed the Action on Illegal Disposal of Asbestos: A Guide for Local Government (local government guide) which was published in November 2022 (see also Chapter 5.2). The local government guide was promoted via a media release and through the Australian Local Government Association newsletter.

A quick reference guide and suite of five fact sheets summarising key information were subsequently developed to support adoption of the local government guide amongst council stakeholders. Up to June 2024, the local government guide has been downloaded 1,064 times, with an additional 1,063 downloads of supporting resources.

Peer-reviewed journal articles

During FY 2022–23, ASSEA contributed to a special issue of the *Sustainability* journal, focused on Sustainable Practices for Asbestos Detection, Management and Disposal in the Built Environment. *Sustainability* is a peer-reviewed scientific journal, and the purpose of the special issue publication was to highlight and promote asbestos best practice approaches in Australia and around the world to a broad audience.

A total of nine articles have been published, with contributions and collaboration from multidisciplinary experts in government, academia and industry. The articles focus on areas such as high-risk asbestos exposure groups, asbestos-related diseases, strategies for the use of artificial intelligence (AI) for asbestos detection, and the emergence of alternative asbestos waste technologies. They provide a useful snapshot in time of current policy positions and discuss innovative prospective approaches.

3.4 Strategic stakeholder partnerships

Advocacy and support group funding

Jurisdictions also assist asbestos advocacy and support groups, similar to ASSEA (see Chapter 3.1), for the promotion of asbestos awareness and safety. For example, the WA Government has funded a grant to support the administration of Asbestos Disease Society of Australia (ADSA) since 1985. The grant assists the ADSA to promote public awareness of the risks associated with asbestos exposure, and services its members and the general community at no cost.

Services include counselling on diagnosis of an asbestos-related disease, medico-legal counselling in matters of workers' compensation and common law damages, provision of information on asbestos hazards and risks associated with its use, and measures that can be taken to prevent asbestos-related diseases. The grant is administered by WorkSafe WA. During FY 2023–24, the grant totalled $100,000 (plus GST). This grant will increase in subsequent financial years.

Local Government NSW

During the reporting period, NSW EPA funded a full time Project Manager – Asbestos Policy within LGNSW to work closely with councils to understand and address their needs.

The funded role focuses on supporting councils to improve their management and regulation of asbestos within their local government areas and to fund related asbestos activities carried out by LGNSW. The role also assists with council policies, including implementing Model Asbestos Waste Policies for each council, and engaging with councils to identify and improve systems and processes, linking activities to the Asbestos in NSW: Next Horizon strategy, which represents the NSW government's current jurisdictional asbestos action plan.

Environmental Health Officers Queensland

The Qld OIR, Department of Environment and Science, and Qld Health collaborated to support local governments to administer devolved responsibilities by delivering Authorised Officer training to 65 new Environmental Health Officers (EHO) in FY 2022–23. In FY 2023–24, 8 people were trained in the new EHO course and 43 people attended refresher EHO training. The training includes asbestos identification, sampling and handling.

3.5 Asbestos awareness and safety training

As covered in the previous progress report, ASSEC referred a recommendation for consistent mandatory asbestos awareness training for all workers in relevant trades to Safe Work Australia. This was based on ASSEA's Outcomes of Asbestos Awareness Training Consultation: Report. Safe Work Australia has advised the recommendations referred by ASSEC on mandatory training are being considered as part of work on asbestos-related recommendations made in the Review of the model Work Health and Safety Laws - Final report.

Construct NSW Asbestos Awareness and Safety course

During NAAW in 2023, SafeWork NSW launched the Asbestos Awareness and Safety course on the Construct NSW Digital Learning Platform. Reforming asbestos awareness training for workers is a priority in the Asbestos in NSW: Next Horizon strategy due to:

- the inadequacies of the current training requirements under work health and safety (WHS) legislation
- the risk to workers who encounter asbestos on the job, and
- low proportion of workers reporting they had completed asbestos awareness training.

The course is aimed at workers who are likely to encounter asbestos at work including and those who may remove or handle up to 10m^2 of non-friable asbestos. The course costs $175 per person, takes around 2.5 hours to complete and can be completed over six months (from enrolment). Completion of the course may meet legal obligations to provide workers who are likely to encounter asbestos on the job with asbestos awareness training.[35] In the four months following release there had been 380 enrolments in the course.

As part of the response to the 2024 asbestos contamination of landscaping products incident (see Chapter 6.2), the course was made free for 3 months from 13 March 2024 to 13 June 2024. By the end of FY 2023–24, approximately 19,740 people had enrolled, and over 10,000 people had completed the course. Approximately 84% of enrolments were unlicensed tradespersons or homeowners, and just over 15% of those who enrolled were located in a state or territory other than NSW. Over 200 people enrolled in the course were from the real estate sector.

[35] For further information on the course see: Asbestos awareness and safety – store.training.tafensw.edu.au

Key observations

- Asbestos awareness-raising campaigns have been effective in increasing knowledge about the health risks of asbestos and where to find more information.
- The top-performing post in the FY 2023–24 National Asbestos Awareness Campaign featured *Was your home built before 1990?* indicating a continued desire for knowledge about the prevalence of asbestos and where to find it. This aligns with previous survey findings that people generally know asbestos is dangerous when it is damaged or disturbed but are less familiar with where it can be found.
- Audiences from CALD backgrounds show a high level of engagement with translated materials and click through for further information, indicating an ongoing need to target this cohort.
- Reaching trades audiences with the trades-specific campaign assets continues to be challenging, noting that this audience were effectively reached with the DIY advertising. Although sequential targeting or alternative channels may address this issue, asbestos awareness training should be the primary strategy for all workers who may encounter asbestos.
- Stakeholders, including asbestos disease advocacy and support groups, continue to provide valuable contribution to awareness activities in significantly extending reach and engagement with key messaging. Additionally, content produced by these groups and deployed alongside ASSEA assets deepens and humanises safety messaging.

Next steps

- Evaluate the FY 2022–23 and FY 2023–24 National Asbestos Awareness Campaigns to inform development of the FY 2024–2025 campaign. Information about the prevalence of asbestos (including where it can be found) needs to be boosted across all demographic groups, as this was the weakest area of knowledge.
- The priorities of the Phase 3 Asbestos National Strategic Plan will also influence campaign development and ASSEA's broader communication strategy, alerting audiences that asbestos materials are now ageing and deteriorating, with a greater risk of releasing asbestos fibres.
- Strategic partnerships with key stakeholders and community groups will continue to extend the reach and amplify the impacts of ASSEA's awareness campaigns.
- A national awareness survey will be conducted as a baseline for the Phase 3 Asbestos National Strategic Plan, to deepen understanding of public perceptions and knowledge gaps relating to asbestos.
- A holistic review of the asbestos regulations, including training obligations, is included in the actions in the Phase 3 Asbestos National Strategic Plan.

4. Asbestos identification, management and safe removal

The aim of Priority 2 is to improve accurate identification of ACMs and ensure they are maintained in a safe state until they can be removed. Targets 2, 5 and 9 relate to this priority.

The aim of Priority 3 is to ensure there are risk-based schedules and processes in place for safe prioritised removal of ACMs. Target 3 relates to this priority.

4.1 Asbestos in publicly owned and controlled buildings

Identifying and assessing asbestos risks

Target 2

All governments have identified and assessed the risks associated with ACMs in publicly owned and controlled buildings.

Target 2 measures the extent to which the governments have a centralised, whole-of-government approach for identifying and assessing asbestos risks across their assets which enables them to better understand the nature of their asbestos legacy. Approaches are on a spectrum ranging from a centralised asbestos register and prioritised removal works, partially centralised registers and dispersed removal works, through to dispersed registers and dispersed removal works.

Since the previous report, little has changed in terms of the overall approach to asbestos registers, the format being mainly electronic and often part of a broader asset or safety management system. This indicates that the target has not yet been met in terms of achieving a centralised, whole-of-government approach in each jurisdiction. However, within the jurisdictions, advances continue to be made.

The Victorian government's centralised asbestos registers for public property, called the AIRSystem, has been enhanced with a Contractor Portal which allows easy access to details of identified ACMs in buildings they are accessing. The portal also records the details of the visitor, and the date and time of the visit to assist duty holders in ensuring contractors undertaking work have access to up-to-date asbestos registers prior to commencing works.

The Northern Territory (NT) government has also enhanced its existing partially centralised online system for asbestos registers which are available by site or by buildings. In FY 2022–23, 1,040 asbestos registers were available electronically and made accessible via a QR code. This rose to 1,164 asbestos registers covering 808 government buildings in FY 2023–24.

The SA government is enhancing their partially centralised system with a standardised risk rating and reporting mechanism to assist with prioritising removal of high-risk ACMs. Development of the model for identifying and priority risk rating (grading) ACMs in SA government buildings was completed in FY 2023–24.

Asbestos registers remain partially centralised in Queensland. As in previous years, government agencies in Queensland and South Australia may opt-in to their partially centralised systems. Regardless of their participation in the centralised register, all agencies manage and set asbestos removal priorities for the assets they are responsible for.

In Western Australia, the Department of Communities, with responsibility for a large proportion of the total assets in the state, has made improvements in their asbestos risk control. In FY2022–23, it instituted a new governance body, the Assets Compliance Advisory Group, with asbestos management a key focus of the group. External legal experts in WHS law were engaged to rewrite its asbestos management documents, resulting in a new Asbestos Management Policy and Asbestos Management Plan aligned with the new *WHS Act 2020*; these were endorsed and approved by the leadership team in September 2023 (FY 2023–24).

The ACT government has advised that it continues to work with all directorates and agencies in considering centralisation and uplift of its current system.

Government agencies in the Commonwealth and Tasmania (Tas) each continue to maintain asbestos registers for their own assets.

Prioritised safe removal

Target 3

All jurisdictions have schedules and processes for the prioritised safe removal according to risk of ACMs from public buildings and infrastructure, and safe disposal of that material.

Target 3 measures government progress on planning for prioritised safe removal of ACMs, using the risk assessment outcomes obtained from having a centralised approach to asbestos registers (Target 2). This includes setting timeframes for removal, preparing work schedules, allocating funds, and setting up systems to engage appropriately qualified contractors.

As with Target 2, little change has occurred to the overall approach. Victoria remains the only jurisdiction to have a state-wide, centrally coordinated schedule for prioritised removal of asbestos from government-owned buildings that is data-informed and systematic. In other jurisdictions individual departments and agencies are responsible for planning asbestos removal work and funding this work from their budget allocations.

For example, in FY 2023–24, the WA government Department of Planning, Lands and Heritage continued to reconcile its extensive number of assets and properties across the state, facilitating updated hazardous building material assessments and removal or demolition works in targeted parts of its large portfolio. It is also working towards an internal Asbestos Management Program, with the recent endorsement of establishing technical working groups to refine works required to better inform a centralised register.

A risk-based prioritised approach is also commonly applied by education departments to government-owned school properties.

While this target has not yet been met overall, other advances have been made. For example, in South Australia, government agencies can apply to the Asbestos Removal Fund (ARF) for financial support to make sites and buildings asbestos free. Under the ARF program approximately $5.5 million has been expended across 117 projects conducted between FY 2019–20 and FY 2023–24.

Overall, every year, all governments must undertake budgetary processes to allocate funding across government programs. Accordingly, it's up to individual governments to prioritise proactive asbestos removal programs with commensurate funding to continue advancing this target.

Local government best practice case study

The City of Melville is a council in the southern suburbs of Perth, Western Australia. In FY 2022–23, it successfully included an *Asbestos Removal Program* for buildings in the city's long-term financial plan, with an annual budget of at least $150,000 for five years. The proactive asbestos removal program seeks to reduce the number of buildings containing ACM each year (currently 65 buildings in total), with the objective being no council-owned or operated buildings with ACMs.

Stage 1 of this program was completed at a total cost of $195,000. Twenty sites were cleared of asbestos, made up of 16 planned sites and an additional four sites targeted through various other projects. Stage 2 commenced in July 2023 and was due for completion in January 2024. Eight locations formed the scope of works for this stage, with an estimated total cost of $200,000.

All buildings receive asbestos clearance certificates upon completion of the works.

Consequently, this approach not only reduced the City of Melville's health risk liability by having less ACMs in its buildings, but additional forward savings were realised on annual asbestos registers and inspections.

4.2 Asbestos in commercial workplaces

Target 5

All commercial building which are required by law to maintain asbestos registers, have up-to-date registers and management plans that are actively being implemented

Target 5 seeks to measure the extent of compliance with WHS duties to maintain asbestos registers and management plans, which are essential for preventing exposure to asbestos fibres and ensuring safe management and removal.

The previous progress report showed good advancement on Target 5, with many WHS regulators introducing targeted compliance campaigns to ensure that duty holders are meeting their obligations to have an asbestos register and management plan. These campaigns have continued to be carried out.

The campaigns typically involve meeting with building owners to discuss obligations for asbestos identification and management, followed by inspection of workplaces. Enforcement actions, such as issuing notices may occur if non-compliance is detected. Examples of WHS Regulator compliance activities related to asbestos identification and management are in Table 12.

Table 12: WHS regulator compliance action examples, asbestos registers and management plans

Jurisdiction	Compliance action examples
South Australia	In FY 2022–23, SafeWork SA completed 70 audits of asbestos registers and management plans. This resulted in 51 improvement notices being issued for the following categories of non-compliance: • No asbestos register • Asbestos register not maintained • Asbestos management plan not maintained • No asbestos management plan.
Queensland	In FY 2022–23, the OIR issued 151 statutory notices specifically related to asbestos registers and management plans. These included: • 126 improvement notices • 9 prohibition notices, and • 16 infringement notices. Sixty-five (65) of these notices were issued during a state-wide compliance campaign conducted over August to October 2022, involving assessment of 125 commercial properties.
Western Australia	In FY 2022–23, 62 improvement notices related to asbestos identification, registers and management plans were issued to owners or property managers for commercial buildings in Western Australia. In FY 2023–24 this rose to 69 improvement notices.
Northern Territory	Ongoing proactive compliance campaigns focusing on asbestos management in commercial properties conducted in FY 2022–23 and FY 2023–24 show low levels of compliance, indicating the need for more targeted work in the future.
Victoria	In FY 2022–23, five improvement notices were issued for having no asbestos register or an out-of-date asbestos register. In FY 2023–24, 12 improvement notices were issued for the same non-compliance categories.

Insufficient information is available to determine the extent to which compliance campaigns are changing behaviour. It is clear, however, that compliance with obligations to have an asbestos register and management plan remains problematic and will necessitate additional and different approaches be employed in the Phase 3 Asbestos National Strategic Plan.

Also of note are observations of the Mid-term Review of the Phase 2 Asbestos National Strategic Plan, which found Target 5 was not a true target in that it restates a legal requirement. The review report called for improvements, including that targets aim to achieve best practice instead of restating legislative obligations.[36]

[36] Asbestos Safety and Eradication Agency, Mid-term Review of the Asbestos National Strategic Plan 2019–23 Commonwealth of Australia 2022, page 13–15.

4.3 Asbestos in the residential environment

Target 9

Develop an evidence-based national picture that assesses the likelihood of asbestos containing materials being present in the residential environment

Target 9 was met in the previous reporting period with ASSEA's creation of the first *National Residential Asbestos Heatmap* (the heatmap) and its release to government users in mid-2022.

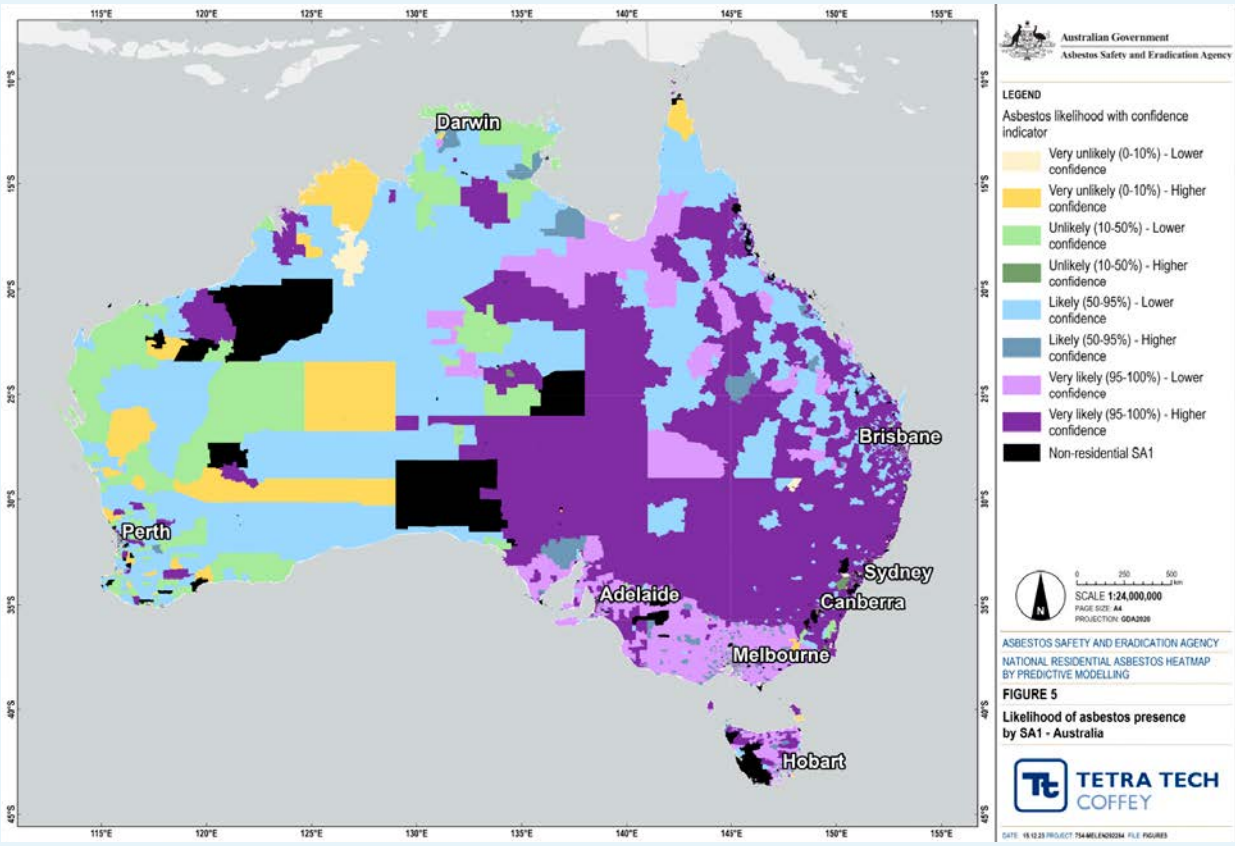
The heatmap uses predictive modelling to assess residential asbestos presence at a national scale. All available residential asbestos data and information has been centralised and combined with publicly available national datasets (e.g. Census 2021 results, buildings data from the National Exposure Information System, or NEXIS) as modelling inputs, to determine the probability of asbestos presence by geographic areas. The heatmap uses AI and machine learning (AI/ML) technology, to maximise the utility of the disparate and disperse residential asbestos data and information.

Between October 2022 and February 2023, ASSEA demonstrated v1.1 of the heatmap by providing in-person training to jurisdictional asbestos coordination groups and other government officials responsible for implementing the Phase 2 Asbestos National Strategic Plan. ASSEA also provided a separate training video for users to access in their own time, and guidance on the type of residential data and information needed to update the heatmap, and how to provide it.

ASSEA collected feedback on the heatmap from participants via an online survey. Overall, the survey showed that the heatmap improved participants' knowledge of legacy asbestos in the residential environment, and could be used in strategic, tactical, or regulatory settings, such as resource planning for future asbestos disposal facilities or emergency response and recovery.

An update of the heatmap (v2.1) was released in December 2023, along with a v2.1 user guide, both developed in collaboration with ASSEA's research partner Tetra Tech Coffey. The heatmap incorporated additional asbestos data provided by jurisdictional agencies and leveraged recent updates to national data on the built environment and socio-economic characteristics for small areas across Australia. Use of these inputs, together with enhancements to the data curation and predictive modelling methodology, has improved the quality of the predictions of asbestos presence in the heatmap.

Figure 8: National Residential Asbestos Heatmap (v2.1)



The predictions are now presented as four categories for the likelihood of asbestos presence, with an additional confidence indicator of the prediction. The colours for these categories have been re-designed for easier understanding of the likelihood-confidence combination (see Figure 8).

From the heatmap, it is estimated that nationally, 67% of the Australian population lives in areas that have a greater than 95% probability of asbestos presence and 83% live in areas with greater than 50% probability of asbestos presence. The asbestos presence prediction increases to 78–94% of the population for areas with homes built before 1990, this year (i.e. 1990) representing the time when ACMs were being phased out as a building material in Australia. The model accuracy for the heatmap predictions remains high, at 93%.

Aggregated data summaries, preserving the privacy of all populations, are available for:

- Statistical Area Level 1 (SA1) regions[37]
- communities like suburbs or rural localities (SA2s)
- Local Government Area (LGA), and
- whole of state or territory.

[37] See Main Structure and Greater Capital City Statistical Areas | Australian Bureau of Statistics

For additional context to the asbestos predictions, reference layers are also available. Asbestos and reference data layers can be superimposed to assist with strategic prioritisation of asbestos risk control measures in the residential environment. Examples of reference layers include the:

- Index of Economic Resources, which provides a measure of relative access to economic resources[38]
- Remoteness Index, which provides a measure of relative geographic access to services[39]
- Australian Disaster Resilience Index, which depicts the capacity to prepare for, absorb and recover from disaster events like bushfires, cyclones or floods.[40]

The heatmap continues to be accessible to jurisdictional stakeholders via the secure WebGIS mapping application provided by Tetra Tech Coffey. ASSEA are also collaborating with Geoscience Australia to establish an agency presence in the Digital Atlas of Australia. This will maintain future access to the heatmap in the Australian Government's central geospatial mapping platform, which brings together trusted national data on Australia's geography, people, economy and environment in one system.

In FY 2023–24, ASSEA has also been working on:

- ways to expand availability and use of the heatmap more broadly, including by non-government stakeholders
- a strategy for future asbestos heatmaps, including ongoing updates and improvements to the residential heatmap and the development of non-residential heatmaps (e.g. government, commercial, industrial, community buildings).

Asbestos in remote Indigenous communities

The challenges normally posed by asbestos removal are magnified in Indigenous communities due to issues of remoteness, funding constraints, and access to asbestos professionals. Government intervention is often required to address ageing and damaged asbestos in these communities.

Addressing asbestos issues in Indigenous communities is an additional focus in state and territory government asbestos action plans. For example, the Asbestos in NSW: Next Horizon plan and the previous plan (Asbestos in NSW: Setting the Direction 2021–2022) both include a priority to address asbestos in Discrete Aboriginal Communities (DACs). These are communities located on former mission and reserve lands.

As part of this priority, the NSW EPA has worked to remove and make-safe legacy asbestos in the Baryulgil and Wallaga Lake DACs. These projects involved remediation works of asbestos-contaminated land and asbestos-containing buildings, conducted in consultation with community members and with consent from the local Aboriginal land councils. The NSW EPA has also funded removal of cottages containing asbestos in the Birrigan Gargle community, flood clean up works in the Karuah Local Aboriginal Land Council (LALC) and the Aboriginal Communities Waste Management Program in Walgett LALC.

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[38] See Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016

[39] See Accessibility/Remoteness Index of Australia (ARIA+) | The Australian Centre for Housing Research | University of Adelaide

[40] See Australian Disaster Resilience Index

4.4 Supplementary resources to support existing approaches

A range of additional projects to improve asbestos identification, management and removal have been undertaken during the reporting period.

Business Research and Innovation Initiative

ASSEA has been supporting organisations through their successful 2021 submission to the Department of Industry, Science and Resources Business Research and Innovation Initiative (BRII) regulatory technology (RegTech) challenge on Using technology for real time and accurate asbestos testing. ASSEA called for new and innovative technology for the real-time and accurate detection of asbestos fibres in air and/or solid surfaces, to overcome technical limitations for asbestos detection with existing real-time devices. Any solution delivered would also need to be non-destructive (i.e. not necessitating the removal, drilling or disturbing of a material to be tested) and capable of meeting regulatory requirements.

Five applicants to ASSEA's BRII RegTech challenge were successful for the 3-month feasibility study phase, commencing in late 2022. They received grants totalling $487,573 to test their ideas to make the detection of asbestos more accurate in real-time and less burdensome overall. These were:

- Portable Analytical Solutions Pty Ltd, for in situ detection of six asbestos types in bulk and airborne filter samples
- Urban Analytics and Complex Systems (UACS) Consulting Pty Ltd, for Asbestos Vision, a smart phone app to identify asbestos and connect people
- Alemir International Pty Ltd, for ALERT, for a real-time monitoring and warning device for airborne asbestos
- Flawless Photonics Pty Ltd, for a hand-portable in-situ real-time non-contact novel fluorescence asbestos sensor
- Predictive Analytics Group (PAG) R&D Pty Ltd, for in situ detection of asbestos in wall panelling using microwave technology.

Two grant recipients – Flawless Photonics and PAG R&D – progressed to the proof-of-concept phase in 2023, receiving an additional $1 million funding each from BRII to further develop their technologies over 15 months.

ASSEA has supported all teams throughout both research phases by providing asbestos subject matter expertise in regular technical work group meetings, and linkages with relevant industry partners and other stakeholders.

NSW asbestos cement roofing – industrial/commercial hotspot study

In February 2024, the NSW government commenced a study to detect asbestos cement roofing (i.e. super-six roofing) in the industrial/commercial sector. This study used the methodology developed for ASSEA's *Residential asbestos cement roof hotspots* study, that is urban analytics, high-resolution imagery, AI/ML and predictive modelling. The first stage was jointly funded by the NSW EPA and ASSEA.

The NSW EPA engaged Urban Analytics and Complex Systems (UACS) for the project, which aims to better understand the scale of industrial/commercial super-six roofing across the Greater Metropolitan Area (GMA) and other high population density regions of NSW. Stage 1, which focused on identifying and quantifying super-six roofing within 'industrial' zonings in the GMA, has been successfully completed.

UACS have been engaged by the NSW EPA for two more projects using the same methodology:

- Stage 2 – other land use zonings with industrial/commercial super-six roofs, and
- Stage 3 – industrial/commercial super-six roofing in the 10 most populous LGAs outside of the GMA.

Stages 2 and 3 are expected to be completed by the end of 2024.

National Guide for Asbestos Surveys

During the reporting period, ASSEA has worked closely with technical experts to develop a draft *National Guide for Asbestos Surveys* (survey guide). The draft survey guide aims to improve consistency in how asbestos professionals assess and describe asbestos risks and the condition of in-situ ACMs. This is essential for good management of ACMs, particularly where risk-based decisions are needed.

The draft survey guide builds on the Victorian Asbestos Eradication Agency's (VAEA) asbestos risk assessment model, which reflects industry best practice. It is applicable to asbestos surveys of both residential and non-residential settings in Australia. The guide is expected to be finalised in FY 2024–25.

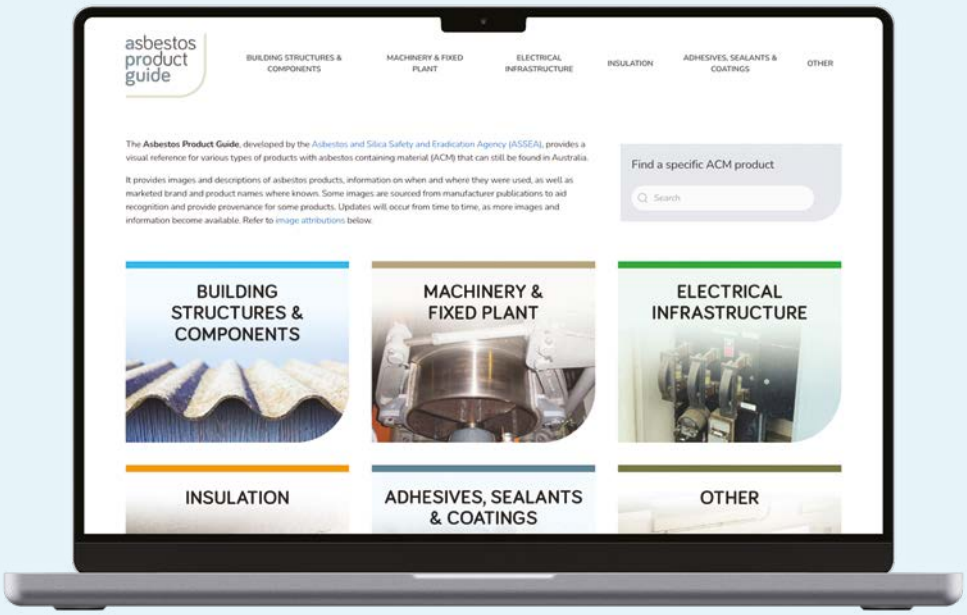
Asbestos Product Guide

Work on the draft survey guide also involved development of an online *Asbestos Product Guide* (product guide) for asbestos professionals, such as asbestos surveyors and removalists, to support consistent and accurate identification of ACMs. While it may also serve as an educational resource for the general public to show where asbestos can be found in buildings, it is intended to assist, not replace, the professional identification of ACMs through sampling and testing.

The product guide consists of images and descriptions of asbestos products, as well as:

- information on when and where the products were used
- marketed brand and product names, where known
- period era and marketing images to provide provenance for the products and to demonstrate how they were marketed to industry and customers
- contemporary images to demonstrate the effect of age, as well as wear and tear, to aid visual recognition
- technical information about the products, where available, to improve understanding of how the products were manufactured, used and installed.

The VAEA and others contributed photos and other intellectual property to support development of the survey and product guides.



Screenshot of the landing webpage of the Asbestos and Silica Safety and Eradication Agency's Asbestos Product Guide

ACT Loose-fill Asbestos Insulation Eradication Scheme

As of 1 July 2024, for the 1,048 properties identified as affected (1029) and impacted (19) by loose-fill asbestos insulation, a total of 1,011 affected properties had been deregistered and removed from the Affected Residential Premises Register. Of these:

- 991 properties had been acquired by the ACT government (975 affected and 16 impacted)
- 994 properties had been demolished under the Scheme (978 affected and 16 impacted)
- 971 remediated blocks had been sold under the Scheme
- 12 properties were remediated through assisted private demolition
- 20 properties were remediated through self-funded demolition
- 14 privately owned, affected residential properties and 4 ACT government-owned properties remain.

ACT Loose-fill Asbestos Disease Support Scheme

Since commencement of the ACT's *Loose-fill Asbestos Disease Support Scheme* in March 2022, the ACT government has processed eight applications from eligible persons under the Scheme and provided financial support of $4.5 million (rounded, as at 30 June 2024).

NSW Loose-fill Asbestos Program

The Voluntary Purchase and Demolition Program was established by the NSW Government on 29 June 2015 for homes in NSW found to contain loose-fill asbestos insulation. The NSW Government, with input from a range of experts, determined that demolition, comprehensive site remediation and disposal are the best ways to ensure the health and safety of the community.

As at 1 July 2024, there have been 158 properties affected by loose-fill asbestos insulation identified with 155 properties demolished and land remediated under the Program. Of these properties:

- 114 have been acquired and demolished by the NSW Government
- 41 remediated blocks were returned to the property owner
- 65 remediated blocks have been sold under the program (including strata complexes sold as one parcel of land)
- 5 remediated NSW Government properties remain to be sold.

The program is continuing to demolish and remediate identified properties.

James Hardie Industries Legacy Asbestos Fill Sites in NSW

The James Hardie Industries Legacy Asbestos Fill Sites in NSW Assessment Update 2022 report was published in December 2022. This assessment update of the previous 2010 report indicates that 50 sites have been identified as being affected by legacy asbestos fill. This is based on multiple lines of evidence, including reviews, stakeholder engagement and precautionary testing of soils, as well as assistance from relevant councils and government agencies.

The NSW EPA manages a long-running program of 'make-safe' works for properties affected by legacy asbestos fill materials. The 'James Hardie Industries Legacy Asbestos Fill Sites' are mainly in western Sydney and used for residential, business, industrial or open space. Since 2017, the NSW EPA has worked with local government to provide education material to affected residents about the risks of asbestos. Residents have also been offered free soil testing, inspections, and repairs where necessary.

In the current reporting period covering FY 2022–23 and FY 2023–24, interim asbestos management measures work has been undertaken on nine sites. An additional tranche of four properties was commenced by consultant GHD and will continue into FY 2024–25.

Key observations

Government owned assets

- Although all governments are identifying and assessing the risks associated with ACMs in their assets, this process is still mostly decentralised. However, with the use of technology, effective centralisation of some data and information has been achieved and expanding this will be necessary to support whole-of-government approaches to prioritised removal.

Commercial buildings

- Regulatory compliance campaigns indicate a high proportion of workplaces continued to be non-compliant with duties to maintain and implement asbestos registers and management plans. Knowing the location and monitoring the condition of ACMs is key to managing the material to prevent exposure.

Residential environment

- Target 9 has been exceeded with further enhancements to increase accessibility and use of the National Residential Asbestos Heatmap.

Next steps

- The Phase Three Asbestos National Strategic Plan maintains identification and removal of ACM as a priority. Consistent with the phased approach, this includes activities to support identification and removal of ACM from all buildings through a combination of regulatory interventions and incentives.
- Actions to raise awareness of asbestos risks among Indigenous Australians, in consultation with communities and peak bodies, to develop initiatives to enable safe removal of asbestos from housing of Indigenous peoples have been included in the Phase 3 Asbestos National Strategic Plan.
- The Phase Three Asbestos National Strategic Plan also includes an action on investigating a national database of asbestos registers which will assist with consistency, management and information in this important area.

5. Asbestos waste

The aim of Priority 3 is to improve the framework for managing asbestos waste, including by improving the accessibility and availability of asbestos waste disposal facilities. Target 7 measures progress under this priority.

Target 7

Easier and cheaper disposal of asbestos waste

The previous progress report noted that developing strategies to dispose of asbestos safely and conveniently, including during disaster events, remains essential. Action was also needed on combating illegal asbestos disposal.

Overall, efforts across the full period of the Phase 2 Asbestos National Strategic Plan have made disposal of asbestos waste:

- **easier** – with an increase in the number of asbestos waste-accepting disposal sites, as well as enhancements in public access to this information to better facilitate community access
- **cheaper** – with removal of government waste levies.

Future priorities must build on this success, especially to support prioritised removal.

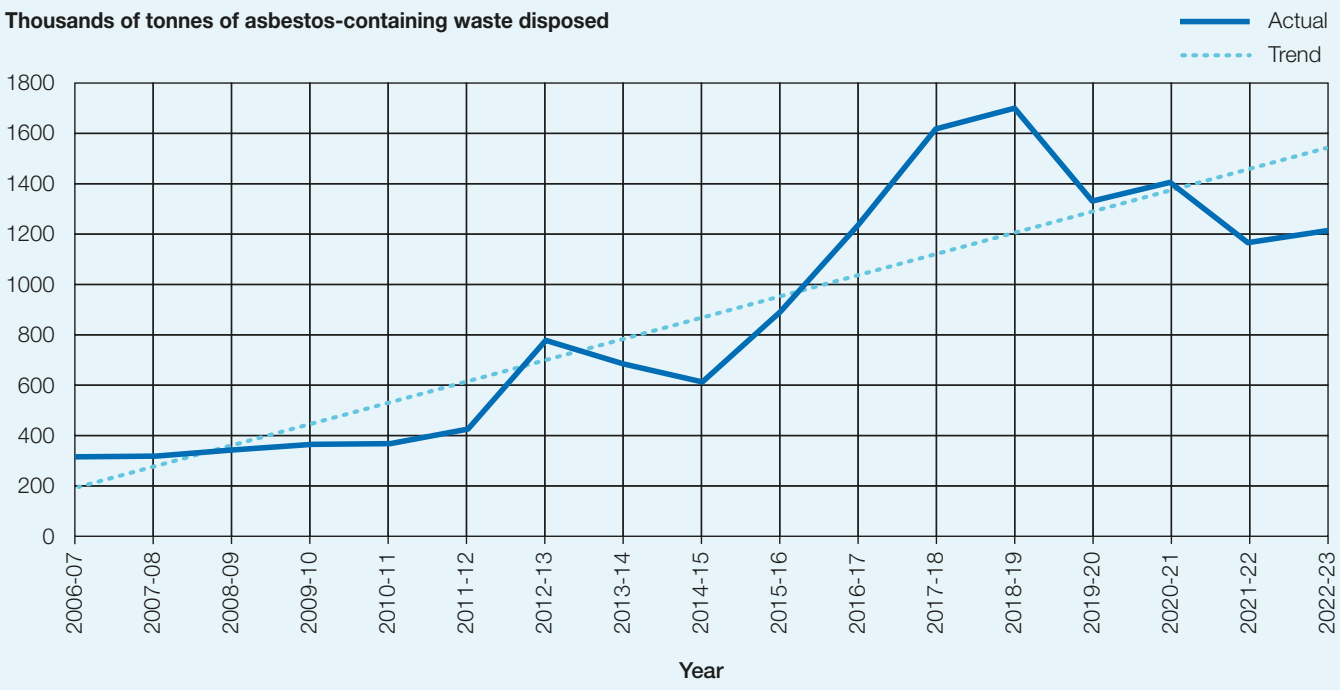
5.1 Asbestos waste data

Asbestos waste data estimates for Australia are updated as part of national hazardous waste reporting to the Australian Government Department of Climate Change, Energy, the Environment and Water. Most asbestos waste comes from renovation and urban development and goes to landfill.

State and territory governments capture asbestos waste disposal data from their tracking systems for hazardous waste, reports from licensed landfill operators, or a combination of these. Data was provided by these governments for FY 2022–23 and for previous years starting from FY 2006–07.

Since FY 2006–07, reports show a total of approximately 14.7 million tonnes of asbestos-containing waste has been disposed of in Australia. The total quantity of asbestos waste disposed in just FY 2022–23, including soil and rubble contaminated with asbestos, was approximately 1,214,000 tonnes.[41] This is an increase on the previous year, and consistent with the long-term increasing trend (see Figure 9).

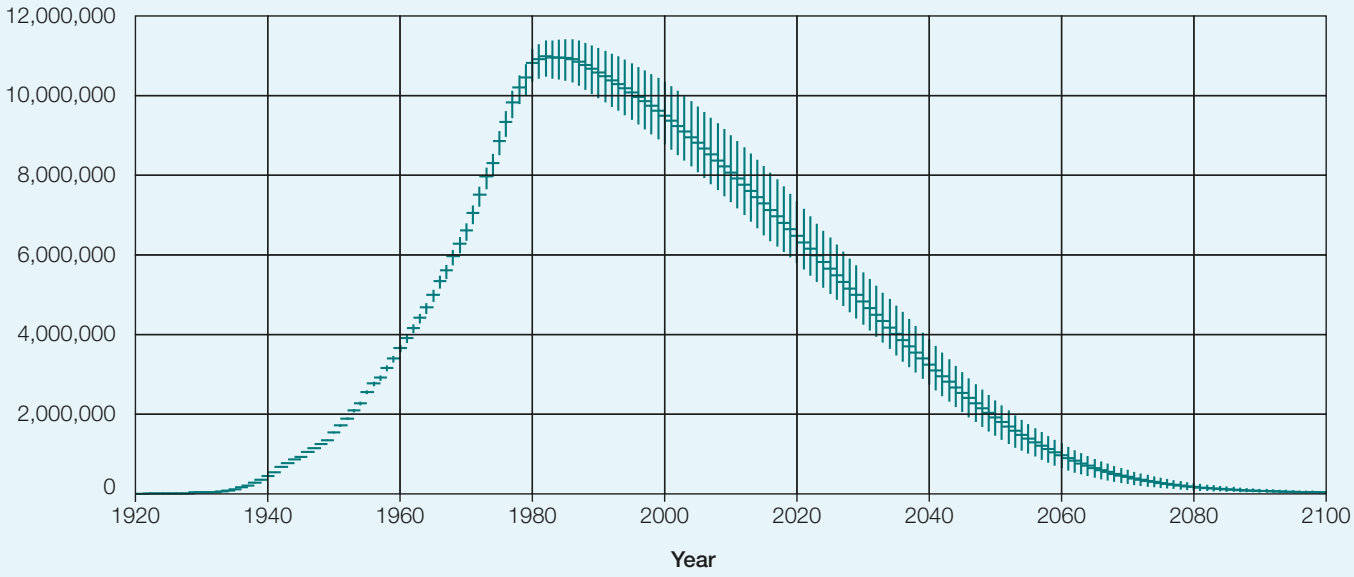
Figure 9: Total asbestos-containing waste per annum



[41] Asbestos waste data in Australia 2022–23 Annual Update – Infographic

In January 2023, ASSEA published the Asbestos Stocks and Flows Legacy in Australia journal article in the peer-reviewed *Sustainability* journal, an update to previous research. The journal article provides an overview of the Australian Stocks and Flows Model for Asbestos, a national model that provides best estimates to examine asbestos legacy stocks remaining in the built environment and flows to waste, now and into the future in Australia. The updated research showed that without significant intervention, ACM stocks will decline to around 1 million tonnes by 2060. The model can be used with updated data and information to help track how much of Australia's hazardous asbestos legacy is remaining and by how much it is reducing. Figure 10 shows the estimated stocks of ACMs in the Australian built environment over time.

Figure 10: Estimated stocks of asbestos-containing materials (tonnes)



Appendix A provides data summarising asbestos waste disposal from FY 2022–23.

Data underpinning national asbestos waste estimates should improve from FY 2023–24. This is because some states can now report quantities of packaged ACM, such as asbestos cement sheets, separately from waste contaminated with ACM, such as soil and rubble. ASSEA will be reporting on the two recording methods separately to provide a more accurate national picture, and to encourage further progress towards harmonised national asbestos waste recording methods.

ASSEA encourages all states and territories to report wrapped ACM separately from soil and rubble contaminated with ACM to enhance the consistency of data, facilitate accurate monitoring of asbestos waste quantities, and to assist future infrastructure planning.

This is increasingly important because with the age of asbestos products in Australian buildings being anywhere between 30–100 years old[42], and climate change escalating the frequency and intensity of extreme weather and other disaster events in Australia[43], the potential impact on asbestos waste capacity cannot be underestimated. Utilising best practice, combined with evidence- or data-based resources like the heatmap (see Chapter 4.3), can assist with future planning.

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[42] Brown B, Hollins I, Pickin J and Donovan S (2023). Asbestos Stocks and Flows Legacy in Australia. *Sustainability* **2023**, *15*(3), 2282.

[43] Frangioudakis Khatib G, Collins J, Otness P, Goode J, Tomley S, Franklin P and Ross J (2023). Australia's Ongoing Challenge of Legacy Asbestos in the Built Environment: A Review of Contemporary Asbestos Exposure Risks. *Sustainability* **2023**, *15*(15), 12071.

5.2 Illegal asbestos disposal

Many factors influence behaviours around asbestos removal, resulting in people engaging in unsafe and unlawful management of ACMs. The main barriers to safe asbestos disposal are cost and inconvenience, as well as incomplete knowledge of the risks of exposure and the perceived likelihood of being caught for unlawful activities.

In November 2022, ASSEA finalised research that had commenced in the previous year and published the Action on Illegal Disposal of Asbestos: A Guide for Local Government (local government guide). The local government guide was developed to assist councils manage and control the risks that arise from illegal asbestos disposal in a complex regulatory environment where work health and safety, public health, environment protection, as well as planning and development laws all apply. It was developed with information from 137 councils across Australia and provides examples of practical actions councils can take to prevent illegal asbestos disposal. These examples are based on successful interventions already being used by individual councils, or via regional collaboration networks of geographically close councils.

Information for the local government guide was collected via:

- open online survey of 86 individual councils, and six regional authorities (together, 92 local government bodies) representing 25 councils (noting most participating councils chose not to be identified)
- desktop review of all council websites, garnering information from materials and resources on an additional 51 individual councils, and two regional authorities representing 11 councils
- in-depth interviews with 20 local government representatives chosen from councils who participated in the online survey.

Supporting information was also published, encompassing the full scope of research undertaken to inform the local government guide. This provided a snapshot of how councils across Australia are meeting the complex issue of asbestos safety, while managing illegal disposal of ACMs.

For example, of the 80% of local government bodies with relevant interventions to prevent illegal asbestos disposal, 86% were focused on asbestos disposal risk. Only around one quarter had activities focused on awareness or removal. These findings suggested that an opportunity exists to increase interventions targeting awareness and removal risk as a step towards preventing downstream impacts of illegal asbestos disposal. A fundamental rethink of preventative actions should be considered as part of future actions.

Furthermore, three in five local government bodies (61%) reported having workers dedicated to responding to illegal asbestos disposal. These local government bodies were more likely than those without dedicated workers to be undertaking interventions. Some pointed to the availability of dedicated workers as a key success factor in sustained and impactful interventions.

To make the local government guide user-friendly for councils, a quick reference guide and thematic summary factsheets have also been produced and published. These resources have been added to the ASSEA Local Government Resource Kit webpage, developed to provide easy access to local government specific asbestos information on the ASSEA website.

5.3 Making asbestos waste disposal easier and cheaper

In sourcing some of the below information, ASSEA has updated the Ideal Asbestos Waste Framework report. This discussion paper presents an aspirational and ambitious view of what an ideal framework for asbestos waste management could look like and how it might be achieved. It updates and extends previous agency research from 2017 and 2020, and aims to:

- explain the regulations underpinning asbestos waste management
- describe the six main components of an ideal framework and
- examine the asbestos waste journey through our communities, from identification to disposal.

The current state of play is outlined, with inconsistencies and issues identified, to provide pathways to achieve an ideal framework.

Easier disposal

Initiatives carried out in the reporting period included an update of ASSEA's existing online tool enabling users to search for disposal facilities which accept asbestos. This tool provides comprehensive details for each facility, including opening times, disposal costs, conditions of disposal, and web links for more information. Providing this information enables members of the public to make informed decisions regarding asbestos disposal. The search tool was the second most visited page on the ASSEA website in 2023, averaging 85 visits per day.

Overall, there are currently 281 licensed asbestos waste facilities across Australia. The current distribution of asbestos waste facilities is summarised in Table 13. It is noted that while waste facilities may be licensed to receive asbestos, some may choose not to accept it for various operational reasons.

Table 13: Waste facilities licensed to accept asbestos, by asbestos source and jurisdiction

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total
Landfills	1	77	4	57	13	7	24	60	243
Transfer stations*	1	27	2	20	16	4	8	15	92
Total sites	3	82	4	67	23	9	27	66	281

* likely only accept small quantities

Alternative asbestos waste sites exist in some jurisdictions. For example, in Western Australia there are currently 142 active registrations for small rural landfills and mine camp landfills, which are permitted to accept asbestos under the Environmental Protection (Rural Landfill) Regulations 2002 (WA).[44]

[44] Data received from the WA Department of Water and Environmental Regulation

Improving asbestos waste disposal is a priority issue for a number of jurisdictions, as this will facilitate safe and lawful transport and disposal of asbestos waste. For example, under the Asbestos in NSW: Next Horizon strategy, the NSW EPA is undertaking an assessment of residual waste infrastructure needs across NSW and has improving asbestos waste disposal as one of its five main priority areas. This work is focused on landfills and transfer stations and will include consultation with stakeholders and the development of a public facing dashboard of infrastructure needs by region. The research is expected to be complete by the end of 2024.

In FY 2023–24, Sustainability Victoria funded three organisations to pilot the establishment and operation of an asbestos disposal point at their waste facilities. The pilot program is trialling infrastructure and systems needed to safely receive, manage, and dispose of asbestos waste. The pilot sites are providing safe, local disposal options for small quantities (under 10 square metres) of correctly packaged, non-friable asbestos waste. The waste is temporarily stored on site in a fit-for-purpose bin, before being transferred to a licensed landfill for safe final disposal. Asbestos disposal points are open to householders, tradespeople and asbestos removalists.

Pilot organisations are supported to safely manage asbestos with resources developed by Sustainability Victoria including:

- a Guide to Developing and Managing Asbestos Disposal Points for the Temporary Storage of Non-Friable Asbestos Waste (Pilot Program)
- communication and education materials with detailed information for customers on how they must safely package and transport asbestos, and onsite disposal requirements.

The pilot program will be evaluated in FY 2024–25 to inform:

- a funding round to support the establishment of additional asbestos disposal points
- an update to supporting resources
- future waste planning.

Overall, there has been an increase in asbestos waste facilities over the term of the Phase 2 Asbestos National Strategic Plan – a modest 6% increase in licensed facilities as categorised in Table 13 or an almost 60% increase if the WA alternative asbestos waste sites are also included in the total count. Jurisdictions are increasingly using targeted and tailored approaches to make their asbestos waste disposal options easier. Continued investigation of the feasibility of implementing emerging asbestos waste technologies[45], can also assist with increasing disposal options.

Cost of asbestos waste disposal

The cost of lawful asbestos waste disposal can be a key driver of illegal disposal behaviour and varies between jurisdictions. Pricing for asbestos waste disposal can include both a gate and levy fee.

The gate fee for asbestos waste reflects the special handling requirements associated with it compared to general waste. To note:

- privately-owned landfills set their own pricing on any incoming waste, including asbestos
- prices take into account a range of commercial factors including labour, machinery, cover, compaction, post-closure provisions, and a rate of return
- council-owned landfills are more likely to offer cheaper rates for asbestos disposal as an incentive, and to avoid incurring the cost of cleaning up illegally dumped waste.

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[45] Frangioudakis Khatib G, Hollins I and Ross J (2023). Managing Asbestos Waste Using Technological Alternatives to Approved Deep Burial Landfill Methods: An Australian Perspective. *Sustainability* **2023**, *15*(5), 4066.

It is not mandatory for facilities to publish their gate fees. The cost of disposing asbestos can vary from $0 (free) up to $2,000 per tonne depending on the type, volume and condition of the material, with the median across Australia being approximately $285 per tonne or $203 per m^3 (see Table 14). Most facilities in most jurisdictions charge by weight, but Western Australia mostly charges by volume and permits visual and estimated measurement, likely because of lack of weighbridges in smaller or remote locations.

Imposing a minimum fee for asbestos disposal is a possible barrier to disposal compliance, especially for small amounts. Only the ACT provides free disposal of small domestic loads (less than 0.25 tonnes), noting the ACT also prohibits all unlicensed removal of ACM.

Table 14: Average and median asbestos disposal costs (gate fees) by jurisdiction, July 2023

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aus
Facilities with minimum fee		0%	40%	25%	48%	58%	67%	30%	52%	40%
Cost per tonne	Median	$174	$371	$480	$317	$266	$206	$284	$183	$285
Cost per m^3	Median	N/A	$270	$495	$140	$220	$104	$63	$126	$203

Source: ASSEA Asbestos Waste Facilities database.

The purpose of waste levies is to minimise waste going to landfill by improving source separation and resource recovery through recycling. As asbestos waste cannot be recycled, most jurisdictions have removed the levy for separated and wrapped asbestos waste (see Table 15), with these changes occurring over the term of the Phase 2 Asbestos National Strategic Plan. NSW is an outlier in this aspect but is currently reviewing the waste levy to examine why recycling rates have plateaued, and to ensure the waste levy continues to effectively increase resource recovery.

Table 15: Comparison of the waste levy on asbestos across Australia

Financial year	ACT	NSW	NT	Qld	SA	Tas	Vic	WA
2023–24	N/A	Up to $170	N/A	$0	$0	$0	$34	$0

Source: Relevant state government websites e.g. Levy regulated area and levy rates (NSW EPA)

Overall, gate fees are typically set based on the business model and/or economic feasibility of providing a specialised waste service; and waste levies reflect longer-term government planning such as shifting into a circular economy, with funds used to support recycling infrastructure for example. Nonetheless, nationally consistent pricing for asbestos waste disposal would overcome the forum shopping issue and create a level playing field, especially for licensed professionals.

Key observations

- Demolition and renovation of ageing asbestos-containing houses and buildings will continue to contribute to an increase in asbestos waste requiring management.
- Councils with interventions targeting illegal asbestos disposal mainly focus on surveillance, enforcement and clean up, leaving a missed opportunity to intervene earlier to prevent illegal asbestos disposal happening in the first place.

Next steps

- ASSEA will continue to develop and update the ideal framework for asbestos waste management to further inform the development of actions to make asbestos removal and disposal easier, cheaper and safer.
- ASSEA will report on the two asbestos waste recording methods separately to provide a more accurate national picture, and to encourage further progress towards harmonised national asbestos waste recording.
- Councils are encouraged to be proactive and implement strategies that prevent illegal disposal of asbestos happening in the first place, such as through education and awareness programs.

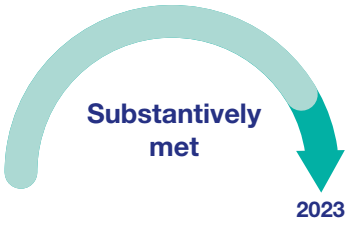
6. Compliance and enforcement

Priority 2 includes an action to ensure effective compliance and enforcement of relevant laws by regulatory agencies. Targets 4 and 6 relate to this priority.

6.1 Asbestos compliance programs

Target 4

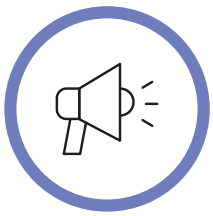
All regulators have in place and have implemented asbestos compliance programs.



Compliance programs are proactive regulatory activities designed to help duty holders understand and meet their legal obligations. All regulators continue to meet this target and reported carrying out a range of programs and initiatives during the reporting period to support compliance with asbestos-related laws. Compliance programs may also lead to enforcement activities.

Some jurisdictions produce regular summaries of their asbestos compliance and enforcement activities. These include SafeWork NSW's Asbestos and Demolition Quarterly Dashboard (not published), the annual WorkSafe WA Health and safety snapshot: Asbestos 2022–23 and annual SafeWork SA Asbestos health and safety snapshot 2022–23. These remain best practice models for identifying trends for future focus, to assist with strategic planning.

Following are examples of compliance campaigns conducted in jurisdictions. Also see Table 12 for compliance campaigns on asbestos registers and management plans.



Education compliance campaigns

- In September 2022, the NSW government ran a multi-agency high visibility deterrence campaign focusing on alleged unlawful transport and disposal of waste, including asbestos contaminated waste, in the Hawkesbury LGA. Forty-two trucks were intercepted over two days; drivers were provided with education material on lawful waste transport and disposal.
- In July 2023, the SA Department of Infrastructure and Transport (DIT) implemented an Asbestos Audit Program to check for compliance with requirements of its guideline 'Asbestos Management and Removal for Government sites' as part of its advisory functions. Adherence to the guideline and associated process is mandated for all SA government agencies and sites. Approximately 20 audits were carried out and the majority identified non-compliance with the DIT guideline and breaches of WHS regulations. All stakeholders were notified of non-compliance, with corrective action required.
- In February 2024, the WA Department of Water and Environmental Regulation initiated a program focused on the illegal dumping of construction and demolition (C&D) waste, including asbestos, in a joint initiative with Crimestoppers WA. This included proactive inspections of asbestos-related sites and intelligence gathering. Officers highlighted the various reporting avenues available for illegal dumping, as well as general awareness.
- In Victoria, between August 2023 and April 2024, a campaign aimed at increasing awareness of Waste Tracker for the top 50 non-compliant asbestos transporters resulted in a 37% increase in the use of the waste tracking system. There were six infringements, and 13 official warnings issued to duty holders that continued to display non-compliant behaviour.

- WorkSafe ACT conducted 16 proactive inspections in the waste collection services industry. The aim was to reduce injuries in the sector and prevent unintended exposure of the public to asbestos and other toxic wastes, by preventing asbestos building waste ending up in recycled products.
- To encourage compliance, the Advisory Service of WorkSafe Tasmania undertook 287 site visits across the state, 101 of which were in the construction industry; asbestos management was discussed at all business sites. There were also nine construction training sessions with TAFE Tasmania.
- In Western Australia, local government authorities as regulators of public health, routinely undertake asbestos-related compliance activities. In FY 2023–24 they provided education via in-person community presentations, videos, new or updated guidance/fact sheets, social media posts, and webinars.

Audits

- SafeWork SA conducted an audit focusing on asbestos management prior to demolition and renovations in FY 2022–23. As part of the campaign, 42 sites where licensed asbestos removal was occurring were visited, and 95 compliance audits were conducted across multiple duty holders. The campaign resulted in 30 statutory notices being issued, consisting of 12 Prohibition Notices and 18 Improvement Notices. Additionally:
  - one licensed asbestos assessor and two licensed asbestos removalists were immediately suspended and subsequently had their licenses cancelled
  - one licensed asbestos removalist was suspended for 12 months
  - one renewal application was refused
  - 13 letters of warning were issued.[46]
- In FY 2023–24, the Australian Government's Telecommunications Asbestos Safety Compliance inspectors conducted 477 proactive compliance activities. This included announced and unannounced site inspections and audits.
- SafeWork NSW regularly undertakes asbestos and demolition licence holder verifications. In FY 2022–23, 243 licenses were checked and verified; in FY 2023–24, 256 licenses were checked and verified.
- Comcare undertook compliance monitoring activities involving:
  - 15 asbestos removal notifications and one a respirable asbestos notification in FY 2022–23
  - 19 asbestos removal notifications, and one respirable asbestos notification in FY 2023–24.
- WorkSafe Victoria conducted 713 proactive site visits related to asbestos in FY 2023–24.
- WorkSafe WA's asbestos team conducts proactive removal inspections and licence compliance checks with:
  - 58 site visits in FY 2022–23, resulting in nine verbal directions and 11 improvement notices
  - 129 site visits FY 2023–24, resulting in 21 verbal directions and 87 improvement notices.
- WorkSafe NT conducted 53 compliance visits related to asbestos in FY 2022–23 and 72 in FY 2023–24. A total of 355 site visits were undertaken during the entire reporting period.
- Workplace Health and Safety Queensland (WHSQ) undertook 349 audits related to asbestos, and a further 11 audits in the mining sector during FY 2022–23.
- In Tasmania, the EPA undertook 16 proactive site visits and/or compliance audits for environmental regulation purposes, and the WorkSafe Tasmania inspectorate undertook 40 proactive and/or site compliance visits.

[46] SafeWork South Australia, Asbestos Management – Demolition or Refurbishment Proactive Compliance Campaign 2023 Closure report, Government of South Australia, 2023.

Complaints and enquiries

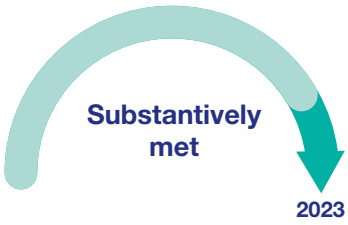
- The NSW EPA's Environment Line (which also receives calls directed from the NSW 1800 ASBESTOS hotline) received 354 calls from the public in relation to asbestos in FY 2022–23. This increased to 392 calls in relation to asbestos in FY 2023–34. A further 100 reports were received through other means in FY 2023–24. The nature of these reports varies but the majority were for illegal dumping.
- The NSW EPA program, Report Illegal Dumping Online (RIDonline)[47], recorded 153 reports of asbestos-related illegal dumping in FY 2022–23. This more than doubled to 364 reports of asbestos-related illegal dumping in FY 2023–24. The asbestos in mulch incident increased public interest in asbestos, leading to more reports.
- The EPA Victoria reported an increase in overall pollution reports relating to asbestos, rising from 313 in FY 2021–22, to 330 in FY 2022–23, and 501 in FY 2023–24. This includes an increase in illegal dumping of asbestos also rising from 114 in FY 2021–22, to 118 in FY 2022–23, and 166 in FY 2023–24. In FY 2023–24, 150 of the 501 pollution reports were sent to the relevant regions for follow up, and 351 were handled by the contact centre, for example by referring to the EPA Victoria website, forwarding to other regulators or applying another appropriate action.
- In FY 2022–23, WorkSafe WA received 269 asbestos complaints. The most common complaints were on asbestos removal work practices, public health risk concerns, asbestos management concerns and unlicensed work. The WA government estimates that it received approximately 1,600 public health complaints about asbestos in FY 2023–24. Asbestos complaints included fence issues (25%), demolition/ renovation issues (21%), illegal dumping (21%), high pressure cleaning (2%), fire damage (2%), and other uncategorised issues.
- EPA SA received 153 reports on asbestos in FY 2023–24, related to air quality (8), illegal dumping (16) and waste (129). These resulted in 11 investigations or incident reports.
- In Tasmania, the EPA received seven reports of dumped asbestos, and local government received 301 reports.

[47] RIDonline is a voluntary reporting system estimated to capture around 60% of illegal dumping incidents dealt with by councils and public land managers.

6.2 Asbestos enforcement actions

Target 6

All regulators are investigating, prosecuting and penalising serious known breaches of asbestos-related laws including illegal waste disposal and importation.



Target 6 seeks to ensure regulators are undertaking activities to direct and enforce compliance where breaches of asbestos-related laws are identified, including seeking sanctions through courts for more serious non-compliance. All regulators continue to meet this target and reported carrying out a range of investigations and enforcement activities during the reporting period.

Figure 11 shows the enforcement actions undertaken in the reporting period for breaches of asbestos-related laws. Totals include notices issued for non-compliance with requirements for asbestos registers and management plans, reported in Chapter 4. Examples of successful prosecutions under both environmental protection and WHS laws that occurred during the reporting period are provided at Appendix B.

Of significance in FY 2023–24, many jurisdictions conducted investigations in response to widespread community concern regarding asbestos-contaminated soil products discovered in NSW and subsequently in the ACT, Queensland and Victoria. It is clear agencies within and across jurisdictions worked collaboratively, providing a coordinated and strategic response to the urgent, complex and rapidly evolving event.

Asbestos contamination of landscaping products 2024

New South Wales

Recycled mulch must not contain asbestos or other specified contaminants. In early 2024, bonded asbestos fragments were found in recycled mulch in a newly opened playground at Rozelle Parklands. Further tracing discovered asbestos in mulch at other sites, including schools, hospitals and health care facilities, homes, shops and other public areas.

The NSW EPA undertook a large-scale investigation, with the support of the multi-agency Asbestos Taskforce. The Asbestos Taskforce oversaw communications and coordinated government agencies, including Fire and Rescue NSW and SafeWork NSW, to ensure sites considered of highest risk to the public were inspected promptly Over 1,200 asbestos tests were undertaken. In early 2024, the NSW EPA issued prevention and clean up notices to an identified supplier. Criminal investigation into the incident was ongoing at the end of FY 2023–24.

Clean up and site remediation works were undertaken, with most works completed by the end of FY 2023–24. The NSW EPA published a Contaminated Mulch Management Plan, to provide guidance to manage the contaminated mulch identified at sites in NSW. It also provided some additional support to residential and not-for-profit landowners with remediation of their sites.[48]

Victoria

In early 2024, EPA Victoria conducted precautionary inspections of 59 Victorian mulch producers to determine if there was an issue in Victoria's mulch supply chain. No asbestos was found in mulch products during these inspections. Following a subsequent report of suspected asbestos contamination in mulch at a local park, EPA Victoria and councils conducted over 200 inspections of parks and reserves across Melbourne. These inspections identified 22 public parks or reserves with a small level of asbestos contamination, all of which have been cleared by the relevant council or land manager.

During the inspections of mulch producers, EPA Victoria required six producers to make improvements. Only one had not made the improvements when re-inspected; EPA Victoria and WorkSafe Victoria are taking action through the courts for this final site. While the source of asbestos was not determined, letters were sent to 161 demolition companies reminding them of their obligations under the *Environment Protection Act 2017*, including directions to ensure ACMs are lawfully disposed as a precaution.[49]

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[48] For further information, see the NSW EPA investigation summary at EPA investigation into asbestos in mulch

[49] For further information see the EPA Victoria incident summary at Response to potential asbestos in mulch in parks | Environment Protection Authority Victoria.

Queensland

Inspectors from WHSQ and officers from DESI inspected 36 workplaces that recycle green waste and/or manufacture and supply composted soil products. This commenced in February 2024, as part of a field-based response to the detection of asbestos in mulch in New South Wales. Officers collected 141 samples of composted soil products and suspected ACMs. One sample from a commercial composting facility and one sample from a local government waste recycling facility returned positive results for asbestos. Statutory notices were issued for the operators of those facilities to prevent distribution. Less than five sites were found to have received contaminated product and each have been remediated.[50]

The Asbestos in Soil 2024 Response Report will be published on the Qld government asbestos website shortly. Inspectors from WHSQ and officers from DESI worked collaboratively through the Interagency Asbestos Group to provide a coordinated and strategic response to the urgent, complex and rapidly evolving field response event. This event highlighted the robust regulatory controls Queensland has in place to manage asbestos and demonstrated that there is coordination, cooperation and communication between responsible government agencies to enable effective enforcement of regulatory controls.

Australian Capital Territory

Following news of asbestos-contaminated mulch in New South Wales, WorkSafe ACT conducted inspection and testing of mulch. In February 2024 bonded asbestos was confirmed to be present in tested samples of mulch received from NSW. A whole of ACT government taskforce was created to respond to the incident.

WorkSafe ACT identified 42 potentially affected sites in the ACT and issued notices under the *Dangerous Substances Act 2004* to all private and government site owners requiring them to isolate and not interfere with or remove the mulch. Testing confirmed contained asbestos mulch at 12 sites.

Remediation of impacted properties commenced in FY 2023–24 and will continue into FY 2024–25. The ACT EPA is reviewing the *Environment Protection Act 1997* (ACT) and associated regulations to improve regulatory oversight for asbestos.

Other jurisdictions

In response to detection of asbestos in mulch in mainland jurisdictions, WorkSafe Tasmania Inspectors conducted proactive visits to premises known to produce mulched landscaping materials. Officers from EPA Tasmania also accompanied the WorkSafe Tasmania inspector on several occasions. Updated guidelines on Approved Management Method for the Disposal of Clean Fill Type 1 and Type 2 were released by EPA Tasmania.

Between March and April 2024, the EPA SA undertook an audit of EPA licensed compost and mulch producers, looking at asbestos management procedures for each site and testing for the presence of asbestos in finished mulch products. The EPA SA audited and took samples from finished mulch products from 14 EPA licensed sites. All test results were ‘non-detect’ for asbestos.

In Western Australia, officers from the Department of Water and Environmental Regulation undertook proactive sampling of compost to identify asbestos contaminants within final stage compost product. Twelve licensed premises had their compost sampled for asbestos, all of which returned negative results. Additionally, eight C&D recyclers and six licensed asbestos removal companies were inspected and spoken to about their asbestos processes. No asbestos was visually identified at any of these sites.

[50] For further information, see the Queensland government investigation summary at Compost/mulch asbestos investigation | Environment, land and water | Queensland Government

Environmental protection

The NSW EPA reported conducting 15 successful prosecutions related to asbestos in FY 2022–23 and 31 in FY 2023–24, with a further 27 ongoing cases which have yet to be resolved. The Victorian EPA also reported eight successful prosecutions FY 2023–24. Examples of prosecutions from publicly accessible sources are included at Appendix B, focused on offences related to asbestos safety only.

Additionally, the following investigations were conducted across other states in Australia, focused on asbestos-related matters. In:

- Western Australia, nine investigations were conducted in FY 2022–23
- Tasmania, three investigations were conducted in FY 2022–23 and two investigations in FY 2023–24
- Queensland there were 16 compliance investigations and 31 illegal asbestos disposal investigations during FY 2022–23, and five public health investigations in FY2023–24
- South Australia, 11 investigations were conducted in FY 2023–24.

Work Health and Safety protection

Examples of prosecutions from publicly accessible sources are included at Appendix B. These focus on prosecutions where the offence was related to asbestos safety.

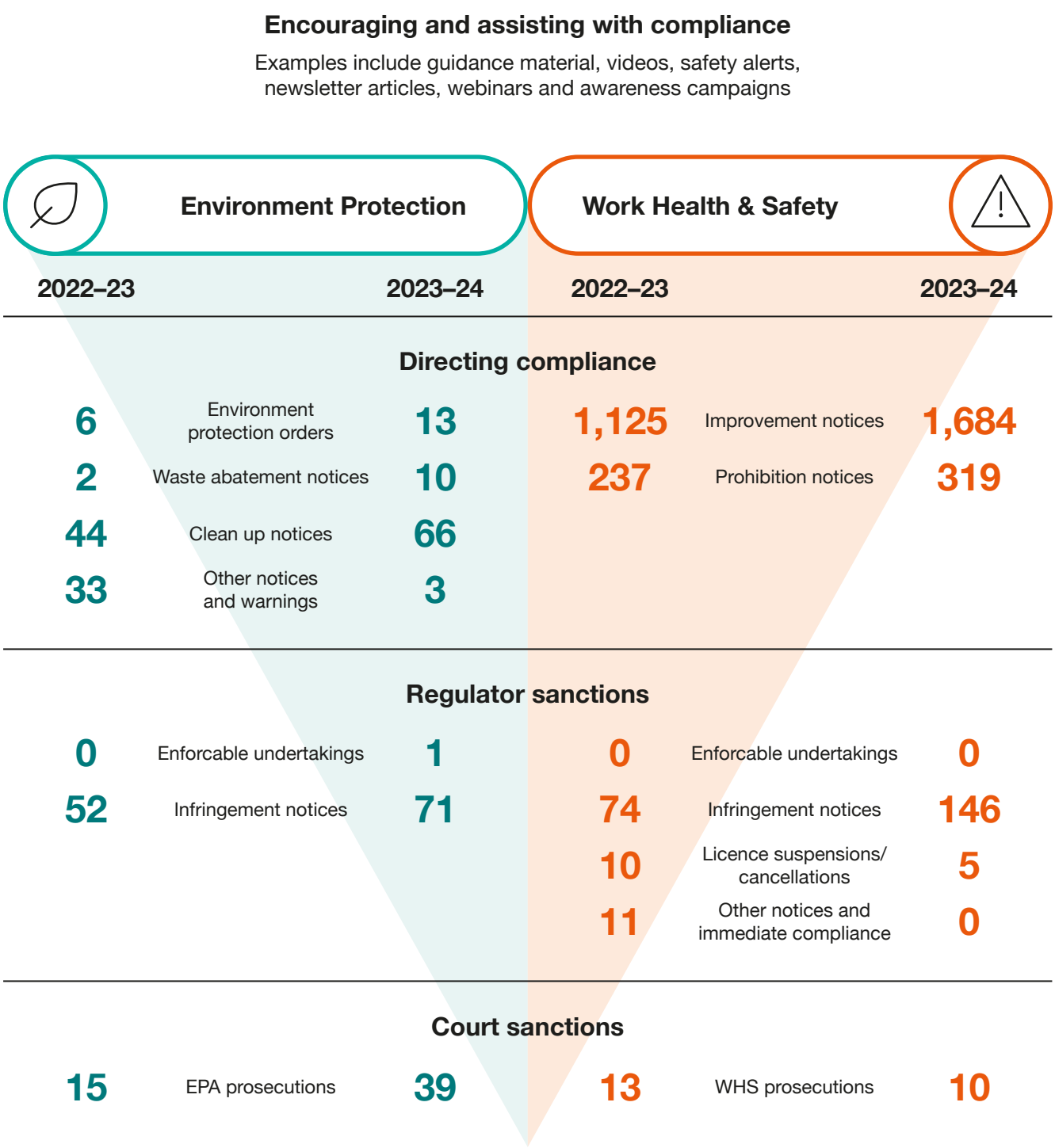
A range of enforcement actions were carried out on asbestos-related WHS issues in Western Australia. Specifically, in:

- FY 2022–23, there were 388 investigations, resulting in two prosecutions
- FY 2023–24, there were 295 investigations, with one Class A asbestos removalist licence suspended, and one Class B asbestos removalist licence cancelled.

Asbestos-related enforcement actions for work health and safety by other jurisdictions in the reporting period include:

- two investigations in the NT; 1 in FY 2022–23 and one in FY 2023–24 concerning unlicensed asbestos removal
- nine investigations in Victoria; four in FY 2022–23 and five in FY 2023–24
- two investigations in SA, both in FY 2023–24 regarding removal of ACM prior to demolition.

Figure 11: Regulatory pyramid showing reported enforcement activities by environment (and public health) protection and WHS regulators for FY 2022–23 and FY 2023–24



Notes:
Figures quoted above are approximate due to gaps in reported data.
Infringement notices include Expiation notices issued in SA.
Prosecution numbers include cases where asbestos may be one component of a broader offence.

Border protection

Before the border

Importing and exporting asbestos is prohibited under the Customs (Prohibited Imports) Regulations 1956 and the Customs (Prohibited Exports) Regulations 1958, except in very limited circumstances. Permission to import or export asbestos is only granted for:

- research, analysis (including testing), or display
- disposal of waste from an Australian External Territory in a state or territory.

ASSEA manages import and export permissions under the customs regulations. Permits can be granted for single use or multiple use, usually for two financial years, and up to five years for government. Permits can cover import and/or export.

Table 16 shows the permits issued by ASSEA during the financial years covered by Phase 2 Asbestos National Strategic Plan. Changes to the number of permits issued in FY 2021–22 reflects transition to a new process with a common renewal date and issuing permits that are valid for two or more financial years.

Table 16: Permits issued for import and/or export of goods containing asbestos, by financial year

Financial year	Import only	Import and export	Export only
2019–20	23	5	0
2020–21	25	4	1
2021–22	9	2	4
2022–23	9	1	0
2023–24	18	4	1

Source: ASSEA permit data

Most import permits are granted for analysis (testing) and research, whereas most export permits are granted for waste containing asbestos exported from an Australian external territory to the mainland for disposal.

At the border

The Australian Border Force (ABF) is responsible for enforcing Australia's asbestos import prohibition. If goods are suspected of containing asbestos, the ABF will direct the goods to an accredited laboratory for testing. If asbestos is detected, the goods will be seized and forfeited. Common products imported with asbestos included vehicles, vehicle parts and agricultural equipment. Building products, gaskets, bulk raw material and mineral slabs also featured. In almost all cases, the chrysotile form of asbestos was detected.

Table 17 shows the detection activities carried out by the ABF during the entire period covered by the Phase 2 Asbestos National Strategic Plan.

Table 17: ABF Compliance and enforcement activities, asbestos prohibitions, by financial year

Financial year	Tests	Detections	Infringement notices	Warning notices	Total fines
2020–21	164	34	6	16	$46,080
2021–22	355	73	5	13	$36,630
2022–23	686	56	3	31	$17,445
2023–24	943	55	3	28	$12,975

Source: ABF data

While there was a trend of increasing absolute numbers of asbestos detections over time, the rate of detections is falling (from approximately 21% in FY 2021–22, to less than 6% in FY 2023–24) considering the increasing number of tests being undertaken. Warning notices have increased, in line with the increased number of tests, but total fines reduced aligned with a reduction in infringement notices.

Overall, not all detections will result in regulatory action, as the ABF has several treatment options available to address compliance with the *Customs Act*. These include education, warning letters, infringements, suspension or cancellation of issued licences and/or prosecution. Where an alleged breach has occurred, the ABF will decide on the treatment to impose on an entity based on (among other things) the nature of the offence, the seriousness of the breach and the compliance history of the person or organisation.

Within the borders

The ABF, Australian Competition and Consumer Commission (ACCC) and WHS regulators work together to trace and commence remediation if prohibited asbestos imports make it into Australia. This may involve publishing safety alerts or negotiating and monitoring product recalls. If multiple jurisdictions are affected, a Rapid Response Protocol (RRP) can be initiated to enable timely collaborative action across relevant agencies. Alternatively, a Small Group Response (SGR) enables a coordinated response when the illegal importation is confined to only one jurisdiction

There were eight new incidents in the reporting period, all of which required an SGR, as the goods were not nationally distributed. One of these led to a published information sheet for Asbestos in imported prefabricated building products in June 2024. An RRP was not required during the reporting period.

The ACCC published three new recall notices for consumer goods containing asbestos in the reporting period for:

- Traxxas, L.P. – Slipper or brake pads for radio-controlled vehicles (December 2023)
- Taizhou Zhiyong Teaching Equipment Co., Ltd - 500ml Essential Oil Distillation Kit (April 2023)
- Steven Brake Pads - Super B Auto Brake Pads formula number M7260 (January 2023)

It is an offence to fail to notify a recall under Australian consumer laws. The ACCC has not been required to take action for failure to comply with recalls of goods containing asbestos.

6.3 Asbestos law and policy changes

New South Wales

In October 2022, a regulatory amendment commenced that expanded the range of asbestos offences which WHS inspectors may issue penalty notices. This includes regulations for use of signage and barricades for asbestos removal work, asbestos clearance inspections, and asbestos clearance certifications.[51] From 1 July 2024, penalty notices may be issued on a further 26 asbestos regulations, and all penalty notice amounts were increased by 24%.[52] These changes provide SafeWork NSW inspectors with compliance tools in situations where a sanction is warranted but the nature of the breach does not necessarily warrant prosecution.

Additionally, amended WHS laws commenced in October 2023 which enable SafeWork NSW to ensure prohibited asbestos, that is ACM fixed or installed after 31 December 2003) is removed permanently from workplaces.[53]

Enhanced environmental protection laws commenced in NSW on 3 April 2024. The laws were amended to provide NSW EPA with enhanced powers to investigate, obtain information, recall products, and expedite compliance with clean up notices. The NSW EPA will also be able to issue public warnings about activities, persons, substances, or complaints of concern. Penalties for breaches of environmental protection laws were also increased, some by 100%; this was the first increase to most penalties since 2005. The NSW Government may consider further changes in response to the investigation into contaminated mulch or recommendations of the Office of the Chief Scientist and Engineer.[54]

Queensland

The Qld Department of Justice and Attorney-General achieved the first step in establishing a statutory seller disclosure scheme for the sale of all freehold land in Queensland with the assent of the *Property Law Act 2023* in November 2023.[55]

When it commences on 1 August 2025, the disclosure scheme will make it mandatory for a seller to disclose relevant information, including warnings for certain matters, to a buyer in a single document along with any prescribed certificates. The Act will be supported by a regulation that will prescribe information that must be disclosed under the seller disclosure scheme, which is proposed to include a warning statement about the potential presence of asbestos and direct buyers to access further information about asbestos.

The Qld government also introduced a bill to expand the range of prescribed cancers listed in Schedule 4A of the *Workers' Compensation and Rehabilitation Act 2003*. Firefighters with qualifying periods of employment are automatically entitled to workers' compensation for the listed cancers unless it can be proved their disease did not arise from, or was not significantly caused by, firefighting employment. Additions include asbestos-related cancers, including malignant mesothelioma.

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51 Work Health and Safety Amendment (Penalty Notices) Regulation 2022 | SafeWork NSW.

52 Work Health and Safety Amendment (Penalty Notices) Regulation 2024 | SafeWork NSW.

53 Work Health and Safety Amendment Act 2023 | SafeWork NSW.

54 What's new in law (nsw.gov.au), Biggest boost to environmental regulation in three decades (nsw.gov.au), and Landmark environmental reforms pass NSW Parliament.

55 The Hon Yvette D'Ath, Media Statement Once-in-a-generation rewrite of Queensland's property laws - Ministerial Media Statements, Queensland Government, 25 October 2023.

Western Australia

In FY 2023–24, the WA Government introduced[56] an amendment bill to civil liability laws that will create a provisional damages regime that allows people with dust diseases to seek multiple sets of damages in certain circumstances.

Under the current laws, a person who suffers a personal injury as result of exposure to asbestos fibres or silica dust in Western Australia and obtains damages cannot seek further damages at a later date if they develop a new or worse disease from the same cause. The amendments will apply to people who have a non-malignant dust-related disease, such as asbestosis or simple silicosis.

Also in FY 2023–24, the Department of Water and Environmental Regulation commenced a formal review of their guideline for Managing asbestos at construction and demolition waste recycling facilities. The Department of Health and Department of Mines, Industry Regulation and Safety are assisting. The guidelines have been updated and are currently being internally reviewed, with public consultation on the draft update expected in the latter half of 2025.

Tasmania

In FY 2023–24, the Tas government introduced a bill amending the state *Asbestos-Related Diseases (Occupational Exposure) Compensation Act 2011*. The amendments respond to recommendations made in two reviews of the Act, in 2017 and 2022.[57]

The bill passed in October 2024. It provides Tasmanians with work-related asbestos diseases, and their families, greater access to the costs of support services extending coverage to medical costs incurred prior to making a claim that are directly related to a successful claim.

Australian Capital Territory

In March 2023, the ACT Government expanded the range of matters for which an infringement notice could be issued and increased the fines associated with the notices. This applies to work where authorisation is required under the regulations such as asbestos removal. Fines were increased to a maximum of $20,000 for individuals, and $100,000 for body corporates. Details of any issued infringement notice may also be listed on the public registers maintained by the ACT Government, such as asbestos removalist or asbestos assessor registers.[58]

The ACT Minister for Sustainable Building and Construction also issued a new Asbestos Advice Notice for use from 1 July 2023. This is a notifiable instrument[59] made under the *Dangerous Substances Act 2004* and is based on ASSEA's property disclosure work. The updated notice provides advice on where ACMs may be found at home and applies to all homes built in or before 1990. This notice must be given to new owners or lessees.[60]

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56 Civil Liability Amendment (Provisional Damages for Dust Diseases) Bill 2024

57 Microsoft Word - Fact Sheet - Asbestos-Related Diseases (Occupational Exposure) Compensation Amendment Bill 2024

58 ACT Government, Magistrates Court (Work Health and Safety Infringement Notices) Amendment Regulation 2023 (no.1)- Explanatory Statement, March 2023

59 Defined as a resource of long-term public interest, for which public accessibility is desirable.

60 ACT Government, Dangerous Substances (Asbestos) Advice 2023 Notifiable Instrument NI2023-303, June 2023

Key observations

- Reporting from regulators on compliance and enforcement activities in relation to asbestos indicates that Target 4 and Target 6 continue to be met.
- The response to asbestos in soil products demonstrates the significant improvements governments have made with effective coordination, cooperation and communication between responsible government agencies to enable efficient asbestos management and regulatory control.
- Data shows imported products with asbestos almost exclusively contain the chrysotile form, highlighting the importance of continuing efforts to extend asbestos bans globally.

Next steps

- As recommended in the Mid-term Review of the Phase 2 Asbestos National Strategic Plan, the Phase 3 Asbestos National Strategic Plan will shift focus from measuring compliance with existing legal obligation.
- Consistency and completeness of data collected for targets should also be improved.

7. International collaboration and leadership

The Australian Government is responsible for implementation of Priority 4, having committed to international collaboration and leadership to help secure a world-wide ban on the production and trade of ACMs. Target 8 relates to this priority.

Target 8

Bans of asbestos production and use in South-East Asia and the Pacific have been influenced and progressed.

ASSEA worked with the following government and non-government organisations to implement Priority 4 and Target 8:

- Department of Foreign Affairs and Trade (DFAT), which leads Australia's negotiations under various trade and economic agreements, and is responsible for applying the Environmental and Social Safeguard Policy on Managing Asbestos Risk to all Australian Official Development Assistance funded activities.
- Department of Climate Change, Energy, the Environment and Water (DCCEEW), which administers Australia's obligations under the Rotterdam Convention. This covers international prior informed consent to trade certain hazardous substances.
- Australian People for Health, Education and Development Abroad Incorporated (known as Union Aid Abroad-APHEDA) who provide on the ground support and assistance in South-East Asia and the Pacific Region. They coordinate asbestos ban groups in the area, are active within the Asia Ban Network (ABAN), and collaborate with other international organisations such as the World Health Organization and the International Labour Organization.
- Asbestos and Dust Diseases Research Institute (ADDRI) which is a World Health Organization Collaborating Centre dedicated to the elimination of asbestos-related diseases.

7.1 Current asbestos mining, production and use

Seventy countries have banned all types of asbestos, and many others don't use it. Singapore banned asbestos in construction since 1989, while Brunei has fully banned all types of asbestos since 1996. Cambodia announced it would stop using asbestos from 2025. In March 2024, the United States EPA announced a final rule to prohibit ongoing uses of chrysotile asbestos, the only form of asbestos still in use or imported to the United States; compliance deadlines to transition away from chrysotile are as soon as is practicable, with defined maximum timeframes also imposed.

The countries that continue to mine asbestos commercially are:

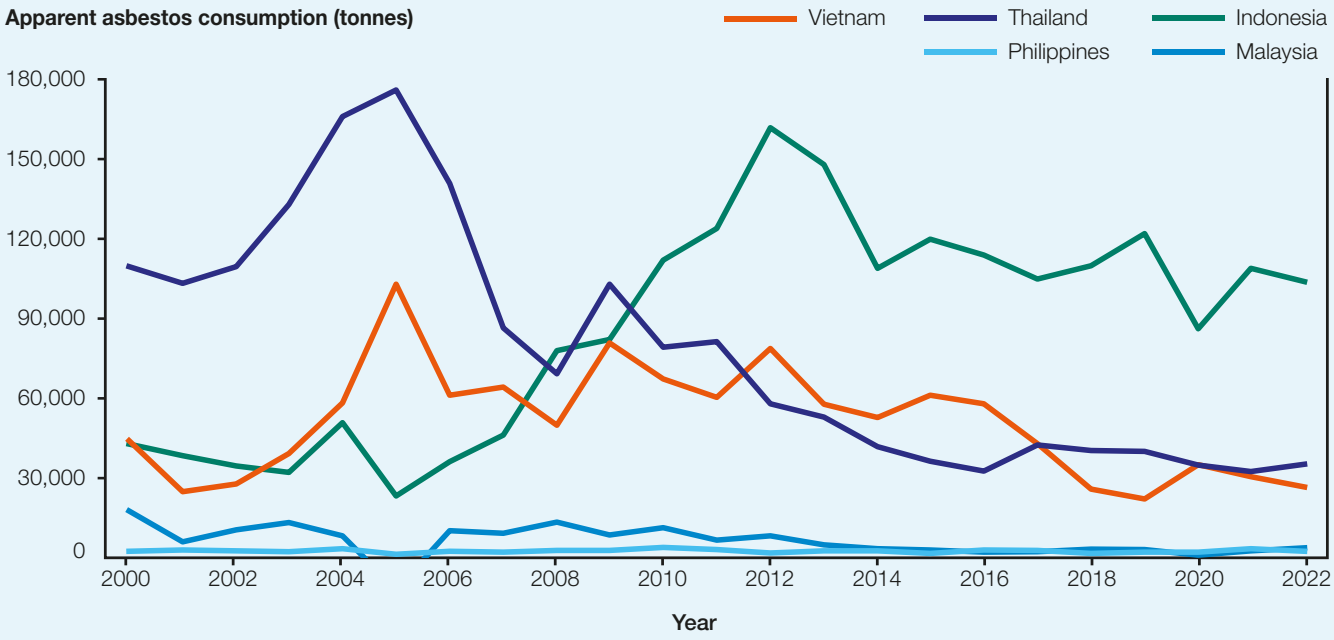
- Russia – extracted 630,000 tonnes in 2023, down from 750,000 tonnes in 2022
- Kazakhstan – extracted 260,000 tonnes in 2023, up from 250,000 tonnes in 2022
- China – extracted 200,000 tonnes in 2023, up from 130,000 tonnes in 2022
- Brazil – extracted 190,000 tonnes in 2023, down from 197,000 tonnes in 2022

The worldwide consumption of raw asbestos fibres was approximately 1.32 million tonnes in 2023, an increase from 1.26 million tonnes in 2022, but a substantial reduction from 2 million tonnes in 2010. Asia has become the dominant consumer of asbestos, with the following five countries now consuming 83% of the total global raw asbestos fibre:

- India – 482,000 tonnes
- China – 284,000 tonnes
- Uzbekistan – 125,000 tonnes
- Russia – 109,000 tonnes
- Indonesia – 94,400 tonnes

In South-East Asia, Indonesia is the largest consumer by volume, followed by Thailand and Vietnam (see Figure 12). Laos (not shown) is the highest consumer per capita.

Figure 12: Asbestos consumption in South-East Asia 2000–2022 (tonnes)



7.2 Influencing asbestos bans in South-East Asia and the Pacific

ASSEA continued supporting Union Aid Abroad-APHEDA's *Asbestos – Not here, not anywhere* campaign in four target countries, being Cambodia, Indonesia, Laos and Vietnam. This work included capacity building activities and raising awareness about asbestos exposure risks, alternative safer materials, safe removal and disposal, and benefits of banning asbestos.

Cambodia

In May 2023, the Cambodian Minister of Labour and Vocational Training announced that Cambodia would implement an asbestos ban in 2025.

In July 2023, the Cambodian Government released the Third Occupational Safety and Health (OSH) Masterplan 2023–2027. One of its objectives is to legally ban all types of asbestos and ACMs, while promoting the use of safer alternatives. A workshop on planning the implementation of the asbestos-related aspects of the OSH Masterplan was held on 31 October 2023 in Phnom Penh, with the support and participation of the ASSEA and APHEDA.

In May 2024, ASSEA and APHEDA representatives joined the Australian Ambassador to Cambodia in Phnom Penh and met with Cambodia's Deputy Prime Minister and Minister of Land Management, Urban Planning and Construction to discuss the next steps for ending asbestos use, and to counteract the ongoing pressure by the asbestos industry that chrysotile asbestos can be used safely.

Indonesia

On 7 May 2024, the Jakarta Health Office announced a prohibition on the use of asbestos material in residential buildings, noting that asbestos can trigger a number of diseases.

Also in May 2024, in a landmark decision for Indonesian workers in the fight against asbestos, the Supreme Court of Indonesia ruled in favour of mandatory labelling of ACMs.

Laos

Lung health checks were provided for 477 workers and community members around asbestos factories in Champasak and Xieng Kuong Provinces.

In January 2024, a workshop was held in Vientiane with 10 ministries participating to build support for a revised National Action Plan on Eliminating Asbestos-Related Diseases and a ban on asbestos in Laos.

Vietnam

Part of a project promoting environmental health for ethnic minorities and communities in rural and mountainous areas in Vietnam included asbestos awareness and removal training, as well as the replacement of asbestos cement roofing with safer alternatives in Bac Kan Province.

Pacific Region

Australia continued supporting the Secretariat of the Pacific Regional Environment Programme (SPREP) with core funding to help Pacific Island countries protect and improve their environment. As part of this work, SPREP implements the Pacific Hazardous Waste Management (PacWaste) Plus project (funded by the European Union) which assists 15 participating countries improve waste management practices of which asbestos is a priority. SPREP's achievements for FY 2022–23 and FY2023–24 include[61]:

- Several countries progressing the implementation of asbestos bans and adopting the Model Asbestos Management Code of Practice
- Asbestos removal training delivered and over 11,000 square metres of asbestos material removed from Kiribati, Nauru and Tonga
- Policy paper on asbestos importation ban approved by Tuvalu Cabinet in March 2024. With the support of Australian experts, Tuvalu also purchased, trained, and deployed the use of a diagnostic tool that can identify the presence of asbestos in the field.

Case study: Capacity building in South East Asia

The current lack of expertise and ability to diagnose asbestos-related diseases in many South-East Asian countries that still use asbestos means that there is no visibility of the extent and impact of asbestos-related diseases, which is hindering the introduction of asbestos bans.

ASSEA, in partnership with ADDRI and Union Aid Abroad-APHEDA, developed an intensive 3-day training program on how to diagnose and treat asbestos-related diseases, including mesothelioma, focusing on the expertise required in pathology, radiology and oncology. It was successfully delivered in Jakarta in June 2023, attended by doctors, nurses and specialists from across Indonesia as well as students from Binawan University. Following a similar format, the training was subsequently delivered in Laos PDR and Vietnam in May 2024.

The program also highlighted the urgent need for these countries to stop using asbestos to avoid the same trajectory in asbestos-related diseases that Australia is experiencing. Outcomes of the program include the development of local guidelines for the clinical management of asbestos-related diseases, as well as further support from ADDRI's clinical experts.

Participants at an asbestos-related disease clinical training workshop

[61] PacWaste Plus Steering Committee Meeting Report, August 2024

7.3 Reforming international conventions

The Rotterdam Convention

The Rotterdam Convention provides a mechanism for Parties of the Convention to decide whether to accept imports of hazardous chemicals listed in Annex III of the Convention and to communicate the decision to exporting Parties.[62] Chrysotile asbestos has been recommended for listing in Annex III since 2006, but agreement has not been reached by the Conference of Parties (CoP) due to the opposition of a small number of parties.

Although listing a chemical on Annex III of the Rotterdam Convention does not constitute a ban, it facilitates valuable information exchange which supports regulation by national authorities.

Australia co-sponsored a proposal, led by Switzerland, to amend the Rotterdam Convention at the CoP held in May 2023 to create an alternative pathway for listing chemicals previously blocked from listing on Annex III of the Convention. The proposal received strong support from parties, however it narrowly failed to secure the 75% of votes required for adoption.

Despite not being adopted, the proposal pushed the reform agenda further with an evidence-based 'right to know' demand, particularly for low-income countries.

The CoP agreed on intersessional work ahead of the 12th meeting of the CoP, seeking information to enhance the effectiveness of the Rotterdam Convention, including trade and socio-economic impacts caused or anticipated by the listing of chemicals in Annex III. Importantly, this incorporated the costs of inaction. Australia provided a submission[63] which noted that the failure to list chrysotile asbestos has contributed to significant quantities of illegal imports of ACMs into Australia.

Indo-Pacific Economic Framework (IPEF) Pillar II (Supply Chains) negotiations

ASSEA provided advice to DFAT during international negotiations on the Indo-Pacific Economic Framework[64] Supply Chain Agreement, which resulted in the inclusion of the following text:

> *The Parties intend to cooperate to deliver technical assistance and capacity building to prevent asbestos-related diseases and to promote transition from the use of asbestos to safer alternative products in IPEF Supply Chains.*

This is the first regional trade agreement that includes asbestos as an issue. The Australian Government also committed $25 million funding over 4 years for technical assistance and capacity building projects across all streams of the IPEF work agenda. Projects will be developed and delivered in partnership with Australian government, non-government and international organisations.

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62 Overview of the Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade. Available from https://www.pic.int/TheConvention/Overview/tabid/1044/language/en-US/Default.aspx.

63 Information submitted by Parties and observers.

64 Australia is a founding member of IPEF, alongside Brunei Darussalam, Fiji, India, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Republic of Korea, Singapore, Thailand, the United States and Vietnam.

Key observations

- While global asbestos production continues to decline, consumption has shifted to developing countries in Asia. Producer countries are using less but exporting more to those countries that have not banned asbestos or have weak regulations.
- There has been further progress in influencing asbestos bans, particularly with Cambodia's decision to ban from 2025, the IPEF agreement to cooperate in transitioning to safer materials and the Indonesian Supreme Court decision on labelling. But these developments are continually being challenged by the asbestos industry aiming to protect its last major global market.

Next steps

- Continue to work on reforms to the Rotterdam Convention and influence other international agreements to promote the Australian Government's position on asbestos bans.
- Support capacity building programs and continue assisting target countries develop capability to detect asbestos-related diseases and collect relevant data, as well as improve practices to prevent asbestos exposure.
- Continue to counter disinformation and misinformation by the asbestos industry and exporting countries.
- Continue to strengthen direct engagement with government officials in South-East Asia and promote the ASSEA website and online resources as trusted sources of information on asbestos.

8. Phase 3 Asbestos National Strategic Plan

Work on the Phase 3 Asbestos National Strategic Plan commenced in late 2022, with most of the development and consultation occurring during 2023, before the end of the Phase 2 Asbestos National Strategic Plan.

In December 2023, amendments to the *Asbestos and Silica Safety and Eradication Agency Act 2013* (the Act) were passed by the Australian Government. The amendments included improved clarity around the requirements for endorsement of national strategic plans and annual progress reporting.

Transitional arrangements for the Act required ASSEA to produce a once-off progress report on jurisdictional progress with implementing the Asbestos National Strategic Plan over the period of January to June 2024. This was intended to bridge the gap between the Phase 2 and 3 plans.

The Act provides for all subsequent progress reports on Asbestos National Strategic Plans to be based on financial years, and include progress made by the Australian, state and territory governments in implementing the endorsed plan. Future progress reports will also address progress against the national targets for asbestos.

Phased approach

The National Strategic Plan for Asbestos Management and Awareness 2014–18[65] established a three-phased strategy for asbestos management.

- The first phase focused on establishing an evidence base for asbestos awareness, identification, and removal with an emphasis on best practice. This was the basis for actions in the 2014–18 plan.
- The second phase, enacted through the National Strategic Plan for asbestos awareness and management 2019–2023, was to build on this evidence base. This was achieved though feasible goals focused on behavioural change, identification and legacy management, safe prioritised removal and effective waste management, as well as proactive international leadership.
- The third and final phase was to address ongoing asbestos risks in the built environment and support prioritised removal so far as reasonably practicable. Actions in the Phase 3 Asbestos National Strategic Plan are consistent with the commencement of this phase.

Development of Phase 3

In acknowledgement of the ambitious nature of the third phase, ASSEA commenced work in late 2022 undertaking additional analysis to inform development. The majority of development work and consultation occurred during 2023. Specifically, work to develop the Phase 3 Asbestos National Strategic Plan included:

- an in-depth stocktake and analysis of the 2012 Asbestos Management Review Report recommendations to identify the extent of implementation
- a cost-benefit analysis looking at impacts and assumptions of proposed strategic actions for asbestos management and removal, to ensure they were sound and appropriate for inclusion
- broad consultation to gain valuable feedback from participants including:
  - workshops with members of the Asbestos Safety and Eradication Council and related Committee on the draft Phase 3 Asbestos National Strategic Plan and its evaluation
  - a public comment period on the drafts, from 4 September to 13 October 2023 involving additional workshops, online webinars, and surveys.

The Phase 3 Asbestos National Strategic Plan was also informed by findings of the Mid-term Review[66] and observations from progress reports.

The draft plan was finalised in January 2024.

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[65] Phase 1 Asbestos National Strategic Plan, see page 8.

[66] Asbestos Safety and Eradication Agency, Mid-term Review of the Asbestos National Strategic Plan 2019–23 Commonwealth of Australia 2022, page 13–15.

Endorsement of Phase 3

The Act now states ASSEA's national strategic plans will be endorsed the day after at least six of the nine Australian, state, and territory governments to agree to the plan.

In February 2024, the Hon Tony Burke MP, Commonwealth Minister for Employment and Workplace Relations, provided the draft plan to his state and territory equivalents seeking their endorsement.

Meeting of WHS Ministers

The draft plan was discussed in session at a Meeting of WHS Ministers on 10 May 2024. Ministers welcomed the Phase 3 Asbestos National Strategic Plan developed by ASSEA. They noted the plan provided jurisdictions with a long-term, phased approach to both eliminating asbestos-related diseases in Australia, as well as supporting workers and others who have developed such diseases. At that meeting, ministers committed to working toward endorsement of the Phase 3 Asbestos National Strategic Plan by 19 June 2024, or as close to that date as possible.[67]

By 30 June 2024, six governments had responded, with four providing endorsement. The Plan was endorsed by the sixth government on 1 July 2024 and took effect from the following day.

At their 18 September 2024 meeting, Ministers noted the Phase 3 Asbestos National Strategic Plan had been endorsed by all jurisdictions. This endorsement represents a commitment by all governments to continue the important work being undertaken nationally to address Australia's deadly asbestos legacy.[68]

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[67] Australian Government, Communique-Meeting of Work Health and Workers' Compensation Ministers - 10 May 2024, May 2024, Department of Employment and Workplace Relations.

[68] Australian Government, Communique-Meeting of Work Health Ministers- 18 September 2024, September 2024, Department of Employment and Workplace Relations.

9. Appendices

Appendix A – Asbestos waste volumes

Source: Blue Environment for ASSEA (2023), published in 2022–23 Asbestos waste in Australia: Data

Table 18: Estimated asbestos waste volumes by waste type, FY 2022–23 (tonnes)

Asbestos Type	ACT	NSW	NT	Qld	SA	Tas	Vic	WA
Wrapped ACM only	9,624	251,581			25,258	149	38,829	14,151
Wrapped ACM + waste contaminated with friable ACM				194,191				
Wrapped ACM + waste contaminated with *only* asbestos							64,100*	
Wrapped ACM + waste contaminated with asbestos			59,720					
Soil contaminated with asbestos		587,854					32,288	

* This value is not included in other totals as there was a partial 'double-count' of the Victorian data.

Table 19: Estimated asbestos waste volumes over the last decade (tonnes)

FY	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
2012–13	5,954	531,000	1,801	113,345	20,129	14,931	65,656	26,045	**778,861**
2013–14	6,680	420,000	1,810	120,728	15,991	14,972	74,046	29,237	**683,464**
2014–15	5,856	306,465	2,000	150,302	14,517	15,015	80,078	38,492	**612,725**
2015–16	68,405	508,156	5,982	145,102	9,224	15,085	101,636	38,724	**892,314**
2016–17	208,474	682,444	5,913	154,608	11,770	15,228	118,626	39,000	**1,236,063**
2017–18	94,293	1,158,050	5,225	149,873	17,302	5,059	154,520	31,886	**1,616,207**
2018–19	48,176	1,318,779	7,118	152,552	42,987	3,259	102,842	24,772	**1,700,485**
2019–20	17,741	899,444	17,435	154,918	35,694	4,094	178,670	24,165	**1,332,162**
2020–21	19,559	841,900	38,483	326,276	21,829	3,844	136,925	17,657	**1,406,474**
2021–22	13,622	601,933	47,398	188,466	45,455	4,244	243,418	20,679	**1,165,215**
2022–23	9,624	839,435	59,720	194,191	25,258	149	71,117	14,151	**1,213,646**

Key for Table 18 and 19

	Inclusion: Wrapped ACM only
No fill	Inclusion: Wrapped ACM, plus soil and rubble contaminated with ACM
####	Source: Provided in collated form by the jurisdiction
####	Source: Collated from transport certificates
####	Source: Estimate based on [population change] x [previous data]
####	Source: Estimate only (extrapolated or interpolated)

Appendix B – Prosecution examples

The following prosecution examples are drawn from summaries published by jurisdictions in databases or media releases. The examples are limited to prosecutions which were finalised in the reporting period, with asbestos as a main component of the breach. Cases involving other breaches, such as working at height or abuse of an inspector, by those working with or disposing of asbestos are not included.

Environmental protection

New South Wales

The NSW EPA issues media releases on significant prosecutions. The examples below summarise cases involving asbestos from the media releases.

In June 2024, Mr Maher El Masri was fined $200,000 for transporting waste to a place not permitted to be used as a waste facility and unlawfully disposing of asbestos waste. The Liverpool Local Court also ordered Mr El Masri to pay the NSW EPA's legal costs of $60,000 and investigation costs of $600.[69]

On 5 August 2022, Mr El Masri was also convicted for making false statements to NSW EPA while they were carrying out their investigation. He was fined $30,000, ordered to pay the NSW EPA $10,000 in legal costs and to publicise the offence in the *Liverpool City Champion* local newspaper within 28 days.[70]

Mr El Masri is the second person to be convicted and fined in relation to illegal dumping at the property after the occupier, Mr Fouad Arja, was fined $180,000 in 2021 following an investigation into illegal disposal at the site. Mr Arja was also ordered to pay the NSW EPA's legal and investigation costs of $90,000.[71]

In December 2023, Mr Ibrahim Elmustapha, former owner of Bowral Landfill was fined $263,000 after the NSW EPA discovered incomplete weighbridge information had been provided. At least 14,000 tonnes of undocumented general solid and asbestos waste had been deposited at the tip.

Mr Elmustapha pleaded guilty in the NSW Land and Environment Court to six charges for providing false or misleading information when dealing with waste between September 2017 and March 2018. The NSW EPA investigation uncovered approximately 430 truckloads of waste had been taken to the landfill but omitted from weighbridge records, avoiding payment of a waste levy.

Mr Elmustapha was fined and ordered to pay NSW EPA's legal costs as agreed or assessed which had been estimated to be up to $145,000.[72]

[69] NSW Government, Second conviction secured after asbestos dumping in Western Sydney caught on drone, NSW EPA, Media Release, 27 August 2021.

[70] NSW Government, *Greenacre man fined $30,000 for lying to the EPA*, NSW EPA, Media Release, 14 September 2022.

[71] NSW Government, *Drone surveillance leads to $270,000 in penalties for pollution offences*, NSW EPA, Media Release, 5 July 2024.

[72] NSW Government, *$263,000 penalty after hiding 14,000 tonnes of general and asbestos waste*, NSW EPA, Media Release, 21 December 2023.

In November 2023, the Ghossayn Group Pty Ltd and two individuals were fined $734,000 for a range of offences relating to unlawful transport of more than 1,200 tonnes of waste, including 379 tonnes of asbestos waste, from a demolition site to a residential property.

The NSW Land and Environment Court held the waste was intentionally transported and disposed of at the residence to avoid paying waste disposal fees. Falsified waste delivery dockets claiming the waste had been lawfully disposed of at a licensed facility were then sent to the site developer with an invoice for works completed.

The Ghossayn Group was fined $550,000 and Mr George Ghossayn, sole director of the Ghossayn Group, was fined $130,000. Mr Dani Geagea was also fined $54,000 for his role in conspiring with others, including Ghossayn Group and Mr Ghossyan, to create false delivery dockets. The court also order that NSW EPA's investigation and legal costs be covered.[73]

In July 2023, Mr Paul Mouawad (also known as Boulou Isaac) pleaded guilty and was fined $189,000 for transporting approximately 1,399 truckloads of construction waste to a semi-rural suburb in northern Sydney. The wasted including asbestos and came from 8 source sites over a seven-month period in 2017.

Mr Mouawad was also ordered to pay NSW EPA's investigation costs of $33,647 and NSW EPA's legal costs as agreed or assessed.

The landowner was separately issued with a clean up notice in respect of the premises and given until December 2023 to remediate the site.[74]

In October 2022, NSW EPA accepted an enforceable undertaking from Veolia for using non-compliant cover material, including asbestos, at its Horsely Park Waste Management Facility from 2017 to 2021.

Under the terms of the agreement, Veolia agreed shut down and remediate the Horsley Park landfill site. They will also pay $590,000. Of this, $70,000 is for compliance training of its personnel. The remaining funds will cover specific environmental projects by the Western Sydney Parklands Trust and NSW EPA costs.

The NSW EPA will regularly receive reports about the progress of the clean up and shut down process.[75]

In September 2022, Hardstand Solutions Pty Ltd and its sole director, Ms Lisa Winter, were fined $40,000 for failure to comply with a clean up notice issued for waste, including asbestos, at a former quarry in the NSW Northern Rivers owned by the company.

Several NSW EPA inspections found samples of waste on the property contained asbestos, as well as inadequate sediment and erosion controls to prevent sediment reaching a waterway on the site. The EPA issued a clean up notice to Hardstand Solutions, which included requirements to install stormwater and sediment controls on the site that complied with best practice industry guidelines.

Hardstand Solutions failed to provide the required evidence and was convicted with failing to comply with the clean-up notice.[76]

[73] NSW Government, *Court orders $730k in fines for Luddenham waste crimes*, NSW EPA, Media Release, 21 November 2023

[74] NSW Government, *Sydney man to pay over $200,000 for asbestos waste offences*, NSW EPA, Media Release, 21 July 2023

[75] NSW Government, *$590,000 financial undertaking secured after asbestos find*, NSW EPA, Media Release, 7 October 2022

[76] NSW Government, *Ignoring EPA directions cost company and director $40,000*, NSW EPA, Media Release, 13 September 2022

Victoria

The EPA Victoria hosts a register of court proceedings for offences under the Environment Protection Act 2017 (VIC) and the Pollution of Waters by Oil and Noxious Substances Act 1986 (VIC).[77]

On 8 April 2024, Mr Al Mounir Barakat was, without conviction, fined a total of $25,000 for a range of offences and ordered to pay EPA Victoria costs of $5,600. Mr Barakat operates a demolition business and in December 2021, he demolished a structure with ACM but did not have an asbestos assessment prior.

Mr Barakat failed to comply with EPA Victoria notices requiring provision of information, engaging a qualified person to undertake a site inspection to determine the level and extent of contamination caused by his actions, and to undertake a clean up to remediate that contamination. Instead, Mr Barakat provided an Asbestos Clearance Certificate stating the site had been cleared of visible asbestos.

On 19 March 2024, Geelong Landfill Pty Ltd trading as Sycle (Sycle) was ordered to pay $50,000 to Corangamite Catchment Management Authority within 60 days for the Moorabool River Restoration Project. Sycle was also ordered to pay $10,000 to the Court Fund, and $5,658 to EPA Victoria for costs.

Sycle accepted more than 140 tonnes of waste that was incorrectly classified as 'packaged waste asbestos' on 29 November 2022. However, the waste was contaminated with high levels of hydrocarbons, a different kind of waste requiring different safety measures. The company failed to report its licence breach or remove the material to a place that was licensed to accept it within the deadline required by its EPA Victoria operating licence.

On 24 January 2024, Planet Safe Timber Pty Ltd (Planet Safe), a sawmill trading as CCA Pine, was found guilty of unlawfully receiving C&D waste on or around 17 December 2021. Some asbestos was confirmed at the site. Planet Safe complied with an Environmental Action Notice (EAN) in April 2022 removing and disposing of approximately 8,100m^3 of waste at a cost of $1.6 million.

Planet Safe was ordered, without conviction, to comply with an adverse publicity order, and to pay a fine of $20,000 and costs of $2,760.

On 7 December 2023, Kyle Road Developments Pty Ltd was, without conviction, fined $7,500 and ordered to pay costs of $44,000 for breaching a condition of a Post Closure Pollution Abatement Notice applicable to a former quarry site in Altona North.

Inspectors from EPA and WorkSafe Victoria attended the site on 24 April 2019 and noted that ACM had been moved from part of the quarry proposed for residential development, to another part of the quarry proposed to be a public open space. This breached a condition of the notice prohibiting waste other than fill material being deposited at the site.

[77] See https://www.epa.vic.gov.au/about-epa/public-registers/court-proceedings

On 28 August 2023, Mr Mokhtar Chebbo was ordered, without conviction, to pay an aggregate fine of $5,000 and costs of $809 for disposal and burning of waste, including asbestos, at an unlicensed semi-rural residence property in Mickleham. The property was leased by Mr Chebbo.

Mr Chebbo began accumulating waste at the premises from around August 2018. On 24 March 2021, EPA Victoria inspected the Premises. Aerial surveillance revealed around 4128m^3 of industrial waste on the premises.

On 28 April 2021, following a pollution report involving the burning of waste, EPA Victoria officers again inspected the premises. During the inspection, an orange excavator was depositing waste onto the fire. The waste that was being burnt included asbestos and construction waste.

On 7 May 2021, EPA Victoria issued Mr Chebbo with a Clean Up Notice requiring him to: a. Stop accepting industrial waste; b. Stop burning industrial waste; and c. Clean up the industrial waste, initially by 9 August 2021. He was, however, observed burning waste after this time, and at the time of sentencing approximately 1,000m^3 of industrial waste remained on the premises.

In May 2023, Mr Jason Kilday and Mr Peter Ranton pleaded guilty to causing or allowing the transport of reportable priority waste (asbestos) without the appropriate registration on 30 September 2021. Mr Kilday was fined $4,000 without conviction and ordered to pay $2,086 in court cost to EPA Victoria. Mr Ranton was convicted and fined $2,000. He was also ordered to pay $2,086 costs to EPA Victoria.

In April 2023, Digga Excavations and Demolition Pty Ltd (Digga) and its director, Mr Mark Fowkes, were each placed on a 12-month good behaviour order without conviction for transport and disposal of soil contaminated with asbestos at site that was not authorised or licensed to receive waste.

Digga was subcontracted to undertake demolition and excavation work at a site in Colac in early 2021. Digga identified the topsoil may be contaminated with asbestos and throughout March 2021, the soil was abated by removing asbestos.

A soil analysis from a consultant showed that the soil was category C contaminated and therefore prescribed industrial waste. However, the Digga operations manager misunderstood the report. Believing the soil to be clean fill, it was deposited as at an Elliminyt site, free of charge.

In addition to the 12-month good behaviour order, Digga was fined $5,000 and ordered to pay costs of $6,160.23 to EPA Victoria.

In March 2023, MG Hobby Farm Pty Ltd was found guilty of a range of offences related to disposal of industry waste at an unlicensed site in Wildwood.

EPA Victoria attended in response to reports of burning of waste on 12 October 2020. They observed burnt ground and smouldering piles of industrial waste. Heterogenous soil containing rocks, plastics, PVC, rubber and rubble was on site on the ground and in a skip bin loaded onto a truck onsite.

A Clean Up Notice (CUN) was issued requiring the cessation of waste burning and removal of all industrial waste from the premises by 6 December 2020. The EPA Victoria issued a further CUN on 4 January 2021 requiring removal of industrial waste, including ACM, by 8 February 2021. Neither notice was complied with.

MG Hobby Farm was convicted and fined an aggregate of $3,500 and ordered to pay costs of $3,278.

On 21 February 2023, Ms Katelyn Hansen pleaded guilty to a range of offences in relation to illegal disposal of industrial waste containing asbestos.

Ms Hansen leased a property in Whittlesea in December 2021, and within the two weeks an excavator was used to dig and bury truckloads of industrial waste containing asbestos.

Ms Hansen provided a response to an EPA Victoria information gathering notice that was subsequently found to be false and misleading. Ms Hansen was then served with an EAN to clean the waste from the site and dispose of it lawfully, but did not comply with the notice.

Ms Hansen was, without conviction, fined $36,000 for all offences, and required to comply with the EAN by 20 May 2024.

In August 2022, Concrete Concepts (VIC) Pty Ltd was convicted and fined an aggregate of $285,000 for disposal of industrial waste, including asbestos, at an unlicensed site and polluting land.

Concrete Concepts was contracted in 2015 to build a soccer pitch based on clean fill, but instead the company brought in more than 100 loads of fill contaminated with asbestos and other waste including bricks, pipes, glass, electrical cables and metal.

The Victorian Department of Education and Training then engaged licensed asbestos removalists, who removed more than 5,800 tonnes of ACM at a cost of $1.5 million. It took nearly 2 years, and the school lost the use of the playground, wetlands area and running track.

Western Australia

The WA Department of Water and Environmental Regulation publishes a list of its enforcement actions, including successful prosecutions.[78]

In March 2023, Mr Jack Scofield, employee of Action Asbestos, was found guilty of illegally dumping a truck load of asbestos sheeting with another employee, Mr Rajwinder Singh, in 2020.

Mr Singh had previously pleaded guilty and was fined a total of $15,800 and ordered to pay costs of $475.80 on 18 March 2022.

Mr Scofield pleaded not guilty. Mr Scofield was fined $15,000 and ordered to pay costs of $4,163 on 8 March 2023.

[78] See https://www.wa.gov.au/service/environment/business-and-community-assistance/environmental-enforcement#prosecutions

Work Health and Safety protection

New South Wales

WorkSafe NSW publishes brief summaries of its prosecutions where there has been a guilty finding and a conviction.[79] *Unrecorded convictions are not published, meaning the summaries below are a subset of the total asbestos safety related prosecutions for the reporting period.*

On 19 April 2024, Jonathan Brian Simnett, a licensed asbestos assessor, was convicted of breaching section 268(2)(a) of the *Work Health and Safety Act 2011* (NSW).

On 12 November 2021 Mr Simnett knowingly altered a Certificate of Analysis and produced it in compliance with the WHS Act/Regulations without indicating the respect in which it was false.

Mr Simnett was convicted and fined $2,500.

On 20 September 2023, George Saratsopoulos was convicted and fined a total of $20,000 for four breaches of the *Work Health and Safety Act 2011* (NSW).

The alleged contraventions were associated with removal of friable asbestos on or around 10 February 2018 and providing falsified documentation to secure removal work for which there was not a licence.

On 31 March 2023, Ripper Demolition Pty Ltd, was found guilty of failure to comply with a prohibition notice.

On 2 July 2021, following a site visit at MacMasters Beach, the notice was issued prohibiting the carrying out of asbestos removal work at the site until a competent person was engaged to perform an assessment and provide a report and remediation plan. The defendant failed to comply with the Notice.

Ripper Demolition was convicted and fined $20,000.

Victoria

Recent prosecutions outcomes and enforceable undertakings are published in a directory on the WorkSafe Victoria website.[80]

In October 2023, Proas Group Pty Ltd (Proas), a company that provides specialist asbestos removal services, pleaded guilty to two breaches of the *Occupational Health and Safety Act 2004* (Vic).

Proas employees were undertaking asbestos removal work in the bathrooms and kitchens of two units in a complex during October 2022. A Safe Work Method Statement was prepared for the work and provided to a WorkSafe Victoria Inspector who attended the site in response to concerns raised by the public. The Inspector found some control measures in the statement were not implemented. For example, an asbestos removal supervisor was not onsite at all times while the asbestos removal was undertaken; no barricading or signs displaying asbestos warnings were erected at entry points to the workplaces; and ACM which had been removed was not wrapped with two layers of required material.

Proas was, without conviction, sentenced to pay a fine of $6,000 and to pay costs of $2,546.

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[79] See https://www.safework.nsw.gov.au/compliance-and-prosecutions/prosecutions

[80] See https://www.worksafe.vic.gov.au/prosecution-result-summaries-enforceable-undertakings

In June 2023, Ayach Demolition pleaded guilty to two charges associated with undertaking demolition work on a Greensborough residence that appeared to have ACM.

A WorkSafe Victoria Inspector attended the site on 8 October 2020 following a complaint from the public about potential asbestos dust. The offender claimed the property had been checked by a licensed asbestos assessor and cleared of ACM. The inspector checked with the asbestos assessor named by the offender. The asbestos assessor advised they had not attended or assessed the site, nor test samples from the site, prior to the demolition work commencing.

The inspector directed the offender to cease all demolition work at the workplace. The inspector reiterated this direction four times as it was not being followed.

The offender was, without conviction, fined an $12,000 and ordered to pay costs of $5,695.

Also in June 2023, Demolition Man Geelong Pty Ltd (DMG), a company involved in demolition works pleaded guilty to failing to provide a safe working environment.

DMG was engaged to conduct demolition works at a residential property in Manifold Heights. A third party was engaged to remove ACM prior to demolition works. The work was undertaken on 23 and 24 December 2019 by the third party, however the clearance certificate they provided was not signed by an independent asbestos assessor.

Following a complaint from the public, on 10 January 2020 a WorkSafe Victoria Inspector attended the site and observed a lack of perimeter fencing and what appeared to be ACM at various places at the workplace. Samples of suspected ACM were obtained by the inspector who also issued non-disturbance notices to the property owner.

The inspector re-attended the site on 14 January 2020 and issued DMG with a notice prohibiting demolition works from continuing until the asbestos at the workplace had been identified and removed.

DMG was, without conviction, sentenced to pay a fine of $4,500 and to pay costs of $6,000.

In May 2023, Liadaho Pty Ltd trading as Steamatic (Steamatic) pleaded guilty to failing to provide and maintain a working environment that was safe and without risks to health. Steamatic failed to ensure persons were not exposed to asbestos fibres arising from the conduct of its undertaking.

On 15 October 2019, two cleaners working for Steamatic lifted vinyl flooring while cleaning up a sewage leak at a residential property in Heywood. The vinyl flooring contained friable asbestos. The homeowner had warned the cleaners the walls may contain asbestos; however, the risk assessment for the job did not identify asbestos as a potential risk. While performing the work, the cleaners wore white suits and gloves due to the nature of the work. Their forearms, faces and necks were exposed.

Steamatic was sentenced, without conviction, to pay a fine of $4,000 and pay costs of $5,112.

Also in May 2023, On Spot Bin Hire and Demolition Pty Ltd (On Spot) was convicted on appeal for a range of offences relating to demolition contracting work involving ACMs at a residential premises located in East Keilor in November 2019. Specifically, WorkSafe Victoria Inspectors who attended the site observed that the dwelling was partially demolished, unsecured and unstable. There were broken pieces of cement sheeting suspected as ACM around the site, which was located approximately 100 meters from a school.

Formal analysis detected asbestos in all samples taken by an inspector.

On re-sentencing, On Spot was sentenced to pay a fine of $12,500 and costs of $3,000.

In March 2023, Nationwide Demolition Pty Ltd (Nationwide) was found guilty of a range of offences relating to carrying out asbestos demolition works without a licence or necessary safety precautions.

On 24 August 2021, WorkSafe Victoria Inspectors observed the director and an employee of Nationwide engaged in active demolition. ACM was mixed with the debris resulting from demolition. There were no decontamination facilities on site, debris was not covered or contained to eliminate the release of airborne asbestos fibres and the workers were not wearing any personal protective equipment. Testing confirmed cement sheeting contained chrysotile asbestos.

Nationwide held a licence for removal of non-friable asbestos in cement telecommunication pits and pipes, not for undertaking demolition works.

Nationwide is in liquidation and there was no appearance for or on its behalf at the hearing. They were sentenced, with conviction, to pay a fine of $9,000 and to pay costs of $4,904.

Also in March 2023, Nu Tech Demolitions and Asbestos Removal Pty Ltd (Nu Tech) pleaded guilty to failing to eliminate or reduce the exposure of persons at the workplace to airborne asbestos fibres, and failing to comply with a requirement to produce documents for a WorkSafe Victoria Inspector.

A Nu Tech worker made multiple attempts to remove a skip bin with unsecured ACM sheeting despite verbal directions that all work cease, and a non-disturbance notice on the worksite. Temporary fencing was also installed to prevent access following an earlier attempt to remove a vehicle with the skip bin that was blocked by police. The vehicle with the skip bin was later unlawfully removed from the workplace and driven in an unsafe manner thereby creating a hazard to the public. Police re-attended, however, were unable to locate the truck and skip bin. A hygienist subsequently arrived at the site and collected a number of samples that tested positive for both friable and non-friable asbestos.

Nu Tech was convicted and sentenced to pay a fine of $25,500 and costs of $3,999.

In October 2022, Carton Finishing Pty Ltd (Carton Finishing) pleaded guilty to failing to provide a working environment that was safe and without risk to health, and failing to ensure the presence and location of asbestos was clearly indicated.

During a site attendance by a WorkSafe Victoria Inspector on 20 March 2020, Carton Finishing advised it had installed 12 ACM insulating blocks on plant approximately five years prior as a heat shield. A sample from these blocks was taken and confirmed they contained chrysotile asbestos.

Carton Finishing was sentenced, without conviction, to pay a fine of $40,000 and costs of $4,319.

In August 2022, Weatherworld Heating & Cooling Pty Ltd (Weatherworld) pleaded guilty to failing to ensure that other persons were not exposed to health and safety risk arising from their conduct.

In January 2020 workers from Weatherworld were installing a ventilation system in a Monbulk residence. The workers made cuts in the ceiling suspected of being ACM which resulted in large amounts of dust and debris. Asbestos in the dust and debris was later found in four rooms at the Monbulk residence.

Weatherworld was sentenced, without conviction, to pay a fine of $4,000 and costs of $4,391.

Queensland

The Office of the Work Health and Safety Prosecutor is an independent prosecution office, established by the Qld government in March 2019. Its website lists court reports from the commencement of its operations.[81] *Asbestos related sanctions are also available.*[82]

On 13 May 2024, an asbestos removal company was sentenced in the Toowoomba Magistrates Court for three breaches of the *Work Health and Safety Act 2011* for unlicensed removal of friable asbestos The defendant was fined $15,000 and no conviction was recorded.

In August 2021 asbestos-backed vinyl flooring was found under carpet during renovation works undertaken at a hospital in Toowoomba. An asbestos removalist with a Class B licence inspected the area and erroneously concluded the backing was not friable. His quote for the work was accepted over a quote from a removalist with a Class A licence. The defendant undertook the work in September 2021. Testing after works were completed found asbestos contamination in the room.

In a subsequent and related case, the asbestos assessor who cleared the defendant's work was also found guilty of breaching the Act and was fined $7,000 plus costs.

On 4 April 2024, a defendant pleaded guilty to a 'Category 3' offence contrary to s.33 of the *Work Health and Safety Act 2011*.

On 18 October 2022, the defendant used a high-pressure water spray to clean an asbestos tile roof at a residential address in West Mackay. This caused disturbance and breakage to asbestos-containing cement tiles, creating airborne asbestos-containing dust and debris (ACD) particles to be distributed throughout the property and onto neighbouring properties. ACD was observed in gutters, below down pipes, ground, and surrounding vegetation.

The defendant received an unrecorded conviction, a $3,000 fine plus restitution order of $51,041.10, and costs of $1,601.40.

On 6 March 2024, a licensed painter, Navid Rezai, and his company Brisbane Top Painting Pty Ltd (BTP), were found guilty of three charges for breaching the *Work Health and Safety Act 2011*.

The defendant's painting business had been engaged by a homeowner to paint the roof of their house which contained chrysotile asbestos. Between 2 August 2021 and 5 August 2021, the defendant used high-pressure water spray to clean the asbestos roof in preparation for painting.

BTP received a recorded conviction, a $37,500 fine, and orders to pay $31,906.60 for the cost of remediation works, $4,000 in restitution to the homeowners, $4,250 in professional costs and $101.40 in court costs.

Mr Rezai also received a recorded conviction and was sentenced to pay an $8,000 fine and $101.40 in court costs.

On 13 February 2024, a company was sentenced for breaching sections 346(1) and 425(1) of the *Work Health and Safety Regulation 2011*. The defendant company's sole director pleaded guilty to failing to have an asbestos register in place at his workplace, a Roadhouse and Caravan Park in the Emerald district. He was fined $2,160 for the offence.

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[81] See https://www.owhsp.qld.gov.au/

[82] See https://www.asbestos.qld.gov.au/sanctions

On 15 December 2023, BNM Ahmad Group Pty Ltd (BNM) was convicted and fined $100,000 for disregarding multiple statutory notices and exposing a range of people to asbestos-related risks.

In 2021, BNM demolished two asbestos-containing residential houses in Brisbane after entering into contracts with the owners, despite not being licensed to undertake the jobs. BNM failed to safely remove asbestos sheeting before demolishing the houses with an excavator. The work triggered the release of ACD. BNM also failed to remove disturbed asbestos materials after completing the demolition tasks, leaving them strewn across the yards.

Inspectors from WHSQ visited the properties and issued BNM with statutory notices requiring it to take steps to safely remove and dispose of asbestos waste, among other things. BNM failed to comply with the notices and the property owners needed to engage alternative demolishers and licensed asbestos removalists to undertake remediation work.

Prior to these offences, BNM was issued with 12 infringement notices for WHS contraventions, as well as 21 improvement notices and 9 prohibition notices requiring it to comply with WHS laws.

On 14 December 2023, a person conducting a general handyman business ('the first defendant') and a worker ('the second defendant') were sentenced for multiple offences under the *Work Health and Safety Act 2011*.

The business was engaged to clean, seal and paint an ACM roof in August 2021. The second defendant and another worker took turns using a pressure washer to clean the roof over two days spreading debris across the property and into neighbouring properties. No fall protection was used.

The business paid $8,265.95 for some expenses relating to initial remediation work, temporary accommodation, car hire and taxi fares for the tenants, and an asbestos inspection and sampling. The remaining remediation work was arranged and paid for by WHSQ at a total cost of $44,335.28.

The first defendant was fined $5,000 for all offences, and a two-year court ordered undertaking under the Act in the sum of $25,000 was imposed. The second defendant was ordered to complete 60 hours of community service within 12 months, and a two-year court ordered undertaking under the Act in the sum of $15,000 was imposed.

On 15 September 2023, a company that operated a business as a principal contractor of commercial construction projects was fined $75,000 and ordered to pay costs of $1,601.40 for breaching the *Work Health and Safety Act 2011*.

The defendant managed installation of air conditioning at a school with identified ACM in March 2020. The defendant made enquiries with an asbestos removal contractor to have asbestos removed from specific rooms, but this was not progressed due to time constraints.

The Site Foreman engaged by the defendant directed a worker to cut access panels in the ceiling of a classroom, which contained asbestos, on 10 March 2020. After cutting at least one of the panels, the worker took a piece of the cut ceiling sheeting to the Site Foreman as he thought it could be asbestos. The Site Foreman indicated there was no asbestos in the ceiling and directed that the worker continue to cut out the panels, which he did until another worker instructed him to stop. In total, the worker cut four square holes in the ceiling using a power tool and handsaw and, in doing so, created dust. He wore a mask while making the cuts but did not use any dust suppression and did not wear protective clothing.

On 10 August 2023, a company providing electrical services was sentenced for having failed to comply with its primary health and safety duty under the *Work Health and Safety Act 2011*.

The defendant was subcontracted by the principal contractor of the project to supply and install air-conditioning units at a Brisbane school, and further subcontracted the mechanical installation work to another company. ACMs were documented in an asbestos register provided to the defendant, and a Safe Work Method Statement for the work was prepared. However, those performing this work did not receive a copy of the asbestos register and were not provided with training in relation to the identification, safe handling, and control measures in relation to asbestos, prior to work commencing.

Installation work commenced at the school on 12 October 2020 and ceased on 25 November 2020. Some of the rooms, including those that contained asbestos, required holes to be cut into the ceilings. Workers used a hole saw attachment on a power drill, resulting in the disturbance of asbestos material and the creation of ACD. Workers did not wear disposable coveralls, and initially used paper disposable masks while performing this work. Respirators were eventually provided to some workers. After 21 October 2020, a Class H asbestos vacuum was provided, which workers used to capture dust when cutting the holes.

The defendant pleaded guilty. The company received an unrecorded conviction and was ordered to pay a $20,000 fine and costs of $851.40.

In separate proceedings on 27 July 2023, the principal contractor for the installation work at the school was fined $5,000 plus ordered to pay costs of $601.40 for breaching the Work Health and Safety Act 2011.

This defendant, a sole trader conducting a business as a builder and construction project manager, maintained responsibility for overseeing and managing installation of air conditioning at the school between 12 October 2020 and 25 November 2020. His tender for the work included removal of asbestos by a licensed asbestos removalist, which did not occur. As described above, workers used power tools to cut ACM in classrooms without appropriate controls, exposing the workers and others to asbestos fibres.

On 19 January 2023, an electrician who ran an electrical business was sentenced for breaching the *Electrical Safety Act 2002* (Qld) on multiple occasions, and for using a drill on ACM without complying with the requirements of, the *Work Health and Safety Regulation 2011* (Qld).

Between February 2020 and February 2021, the defendant undertook work at multiple properties in South-East Queensland which resulted in the Electrical Safety Office (ESO) receiving numerous complaints in relation to the work performed. The ESO investigated and found multiple defects.

The defendant was fined $3,600 for the regulatory breach related to ACM and ordered to pay costs. Further penalties applied under the *Electrical Safety Act 2002*.

Western Australia

WorkSafe WA publishes summaries of successful prosecutions under the Occupational Safety and Health Act 1984 and Occupational Safety and Health Regulations 1996.[83] Cases where asbestos safety was a major factor are briefly described below.

One conviction was made for unlicensed ACM removal in the reporting period, however, sentencing occurred in FY 2024–25. The conviction was for breaching the WHS Act by removing 41 metres of asbestos-containing fencing from between two houses in Beckenham when the person did not hold an asbestos removal licence.[84]

South Australia

SafeWork SA publishes summaries of successful prosecutions under the Work Health and Safety Act 2012 (SA).[85]

Steven Cutts, trading as SC Roofing and Cladding, was convicted for breaching the *Work Health and Safety Act 2012 (SA)* in performing unsafe asbestos removal work at a home and doing so while unlicensed.

The homeowner engaged the business to perform building works and asbestos removal in September 2022 at their home in the Fleurieu Peninsula while it was occupied. The homeowner became concerned after realising no warning signs or barricades were being used, and seeing workers breaking apart asbestos cladding with crowbars, drilling ACM, and leaving debris in the front yard. Workers were also seen driving away with trailer loads of uncovered asbestos materials.

SafeWork SA investigators attended the property to observe the work and immediately prohibited further work at the site. SC Roofing and Cladding removed about 38m^2 of "fake brick" fibre cement sheeting from the house and left debris containing asbestos in the house, driveway and garden beds.

The South Australian Employment Tribunal fined Mr Cutts $84,000, before reducing this for his guilty plea, and then waiving the penalty because of his personal circumstances. However, it ordered him to pay the homeowner $11,330 in compensation.

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[83] See https://prosecutions.commerce.wa.gov.au/

[84] WA Government, $10,000 fine for removing asbestos without a licence, WorkSafe Commissioner, August 2024.

[85] See https://safework.sa.gov.au/enforcement/prosecutions

asbestossafety.gov.au