Australian Government
Asbestos Safety and Eradication Agency

Asbestos National Strategic Plan
Implementation 2019–23

Asbestos National Strategic Plan
Progress Report 2021-2022

June 2023

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Australian Government
Asbestos Safety and Eradication Agency

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Contents

In compiling this report the Asbestos Safety and Eradication Agency (ASEA) has relied on information provided by state and territory governments and the Australian Government (together, 'the jurisdictions'). ASEA has worked closely with the jurisdictions to address any data gaps and has used all reasonable endeavours to ensure this report is an accurate reflection of Australia-wide measures taken to implement the National Strategic Plan for Asbestos Awareness and Management 2019–2023 (Asbestos National Strategic Plan) during the 2021–22 financial year. There are, however, unavoidable data gaps for reasons including unavailability of information, and/or differing interpretations of reporting requirements taken by the jurisdictions. ASEA has attempted to present data obtained from the jurisdictions in a consistent and comparable report, which tracks progress against the Asbestos National Strategic Plan targets. Each year, ASEA conducts a post-data collection review and implements enhanced data capture and governance processes to continually improve data quality for future reports.

List of acronyms

ABAN	Asia Ban Network
ABF	Australian Border Force
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACMs	Asbestos containing materials
ACT	Australian Capital Territory
ACTPG	ACT Property Group
AI	Artificial Intelligence
AMR	Australian Mesothelioma Registry
ANSTO	Australian Nuclear Science and Technology Organisation
APHEDA	Australian People for Health, Education and Development Abroad Incorporated
ARD	Asbestos-related disease
ASEA	Asbestos Safety and Eradication Agency
ASR	Age-standardised rate
BEMIR	Built Environment Materials Information Register
CALD	Culturally and Linguistically Diverse
CoP	Conference of the Parties
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DFAT	Department of Foreign Affairs and Trade
DIY	Do-it-yourself
EPA	Environmental Protection Authority
GBD	Global Burden of Disease
HSE	Health and Safety Executive
IARC	International Agency for Research on Cancer
IDACUP	Illegally Dumped Asbestos Clean-up Program
LVAT	Latrobe Valley Asbestos Taskforce
MIP	Major Infrastructure Project
NAAW	National Asbestos Awareness Week
NACC	NSW Asbestos Coordination Committee
NAP	National Asbestos Profiles
NHMRC	National Health and Medical Research Council
NPEAD	National Action Plans on Eliminating Asbestos-Related Diseases
NSW	New South Wales

NT	Northern Territory
PacWaste	Pacific Hazardous Waste Management
PPE	Personal protective equipment
Qld	Queensland
RPE	Respiratory protection equipment
RSHQ	Resources Safety and Health Queensland
SA	South Australia
SA1	Statistical Area 1
SAMIS	Strategic Asset Management Information System
SPREP	Secretariat of the Pacific Regional Environment Programme
Tas	Tasmania
UNSW	University of New South Wales
VAEA	Victorian Asbestos Eradication Agency
VET	Vocational Education and Training
Vic	Victoria
WA	Western Australia
WHS	Work health and safety
WHSQ	Workplace Health and Safety Queensland

Executive summary

This report outlines progress in implementing the National Strategic Plan for Asbestos Awareness and Management 2019–2023 (Asbestos National Strategic Plan) based on information provided by the state and territory governments and Australian Government for 2021–22, and research undertaken by the Asbestos Safety and Eradication Agency (ASEA).

This report is a continuation of the Mid-term Progress Report, as many activities commenced in previous years. Progress measured against the national targets shows that 6 of the 9 targets require ongoing work. One target has been achieved with the completion of the first version National Residential Asbestos Heatmap.

Target guide

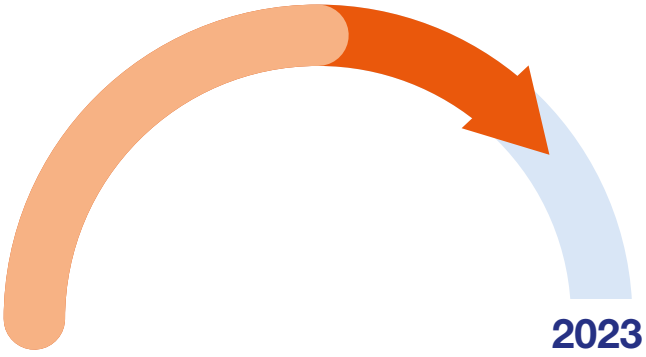
progress to June 2021	progress to June 2022	More work required
progress to June 2021	progress to June 2022	On track

Summary of progress

Target 1

Increased awareness of the health risks of asbestos-containing materials (ACMs) and where to source information (Chapter 3)

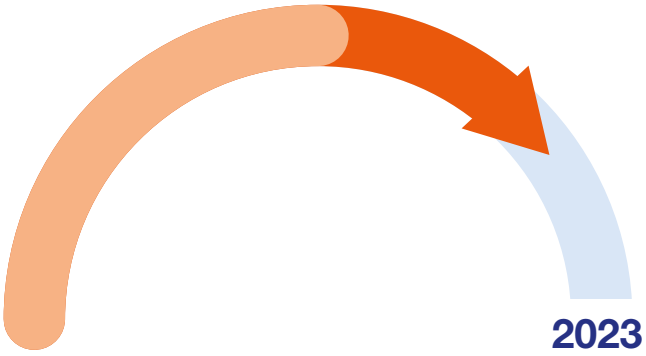
ASEA's research and that of its stakeholders shows there is an increased awareness and knowledge of the health risks of ACMs and where to source information. There is also an improving level of awareness that asbestos is common in Australian buildings. However, a key at-risk cohort, the homeowners and occupiers, is not a homogenous group. Performing a latent class analysis yielded 5 distinct segments based on clustering similar demographic, socioeconomic, behavioural and attitudinal traits. This revealed differing levels of awareness among the segments in this cohort.



Target 2

All governments have identified and assessed the risks associated with ACMs in publicly owned and controlled buildings, land and infrastructure (Chapter 4)

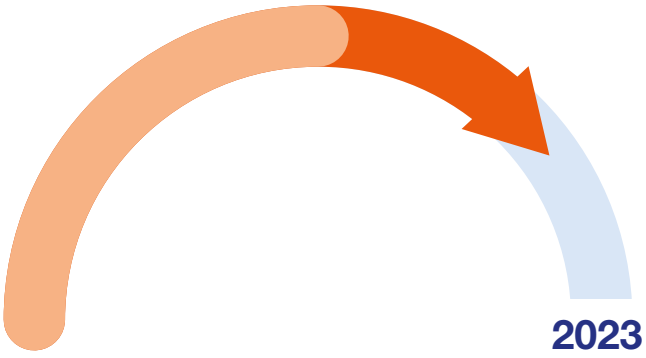
Although all governments are continuing to identify and assess the risks associated with ACMs in their assets, this process remains mostly decentralised and managed at agency/departmental level.



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 (Chapter 4)

Governments remain at different stages of maturity in relation to a systematic approach to asbestos removal – only a few have prioritised removal schedules.



Target 4

All regulators have in place and have implemented asbestos compliance programs (Chapter 6)

All regulators continued undertaking various asbestos-related compliance activities during 2021–22, including publishing guidance material and conducting awareness campaigns.

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 (Chapter 4)

Progress against this target was not measurable in the Mid-term Progress Report due to a lack of data. In the 2021–22 period, some WHS regulators were able to report on regulatory activity associated with this target, indicating a lack of compliance in some workplaces with the duties to maintain and implement asbestos registers and management plans.

Target 6

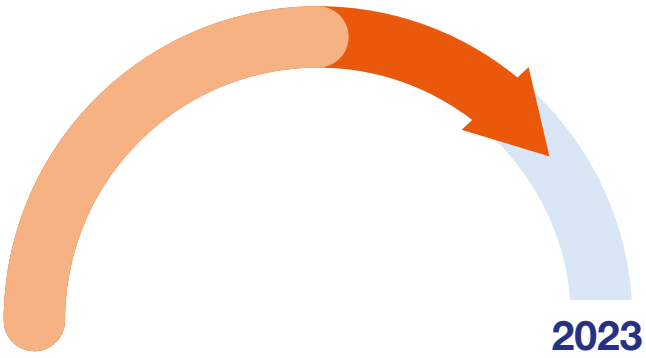
All regulators are investigating, prosecuting and penalising serious known breaches of asbestos-related laws including illegal waste disposal and importation (Chapter 6)

All regulators continued imposing sanctions and prosecuting serious breaches of asbestos-related laws.

Target 7

Easier and cheaper disposal of asbestos waste (Chapter 5)

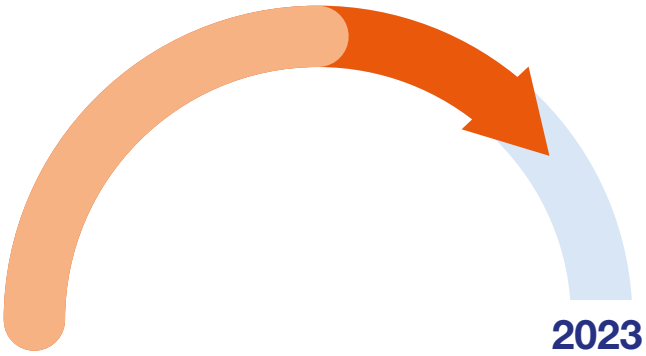
The total amount of asbestos waste generated in 2021–22 was 1.1 million tonnes, which is 22% less than the previous year. Despite this, long-term trend analysis still predicts increasing levels of asbestos waste. More work is needed to combat illegal asbestos disposal and to facilitate easier and cheaper disposal of asbestos waste.



Target 8

Bans of asbestos production and use in South-East Asia and the Pacific have been influenced and progressed (Chapter 7)

While national level asbestos prohibitions have yet to be implemented in the target countries, further progress has been achieved in Vietnam, Lao People's Democratic Republic, Indonesia and Cambodia through the *Asbestos – Not here, not anywhere* campaign.



Target 9

Develop an evidence-based national picture that assesses the likelihood of asbestos containing materials being present in the residential environment (Chapter 4)

Target 9 has been achieved with the completion of the first version of the National Residential Asbestos Heatmap.

A Mid-term Review of the Asbestos National Strategic Plan found that it remains an effective and necessary tool to coordinate asbestos actions nationally and within jurisdictions. However, some of the targets have proven difficult to achieve by the end of 2023 and difficult to measure. The changes and improvements identified in the review will be considered in developing the third phase of the Plan.

1. Introduction

This report outlines progress against the 9 national targets under the National Strategic Plan for Asbestos Awareness and Management 2019–2023 (Asbestos National Strategic Plan), covering activities in financial year 2021–22. It is based on information provided by the Australian Government, state and territory governments, and research undertaken by the Asbestos Safety and Eradication Agency (ASEA).

This report is not a stand-alone document and should be read as a continuation of the Mid-term Progress Report. Many activities highlighted in this report commenced in previous years, reflecting the long-term nature of dealing with Australia's asbestos legacy. The process for reporting and measuring progress under the Asbestos National Strategic Plan is outlined in the Mid-term Progress Report.

1.1 Implementation in jurisdictions

The Asbestos National Strategic Plan ensures all governments across Australia are working cooperatively towards a common goal. It also brings government agencies together within each jurisdiction to ensure actions are coordinated. Most jurisdictions have established interagency coordination groups and developed their own action plans aligned with the 4 national priorities, including:

- the Asbestos in NSW: Setting the Direction 2021–22, released in November 2021;
- the South Australian Asbestos Action Plan 2019–2023;
- a new State-wide Strategic Plan for the Safe Management of Asbestos in Queensland 2022–2025, released in August 2022.

ASEA continued to support implementation through its research, which addresses many strategic actions, and can be used by governments to inform their asbestos policies and practices.

ASEA also continued to participate in interagency coordination group meetings and co-hosted the 2022 Asbestos Safety and Management Conference with the Blue Mountains City Council in New South Wales (NSW). The conference, held in the Blue Mountains, enabled the exchange of knowledge and expertise to support collaborative action.

Image: 2022 Asbestos Safety and Management Conference – James O'Loghlin, Conference MC

Image: 2022 Asbestos Safety and Management Conference – Plenary session

Image: 2022 Asbestos Safety and Management Conference – Exhibition

Image: 2022 Asbestos Safety and Management Conference – Delegate bags

Photographer (all 4 images): Ann Niddrie Creative

ASEA completed a Mid-term Review of the Asbestos National Strategic Plan, which found that it remains an effective and necessary tool to coordinate asbestos actions nationally and within jurisdictions. However, in addition to being difficult to measure, some targets reflect the ongoing nature of asbestos management, and are therefore unlikely to be 'met' by the end of the current phase of the Plan. The changes and improvements identified in the Mid-term Review will be considered in developing the third phase of the Asbestos National Strategic Plan.

1.2 Structure of this report

Table 1 shows how the chapters in this report align with the national priorities and targets under the Asbestos National Strategic Plan. This is the same structure used for the Mid-term Progress Report.

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

Report chapter	National priority	National target
1. Introduction	-	-
2. Asbestos-Related Diseases	Aim	-
3. Awareness	Priority 1	Target 1 – Awareness levels
4. 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. Waste	Priority 3	Target 7 – Disposal initiatives
6. Compliance and Enforcement	Priorities 2 and 3	Target 4 – Compliance activities
		Target 6 – Enforcement activities
7. International	Priority 4	Target 8 – International bans

Each chapter concludes with ASEA's observations of progress against the national targets, the challenges identified in progressing towards some targets, and where incomplete or inconsistent data has made an accurate assessment difficult. Ideas on improvements and next steps are also proposed.

Key observations

- Implementation of the Asbestos National Strategic Plan has been steady, noticeably impacted by governments' need to prioritise the COVID-19 pandemic over the past 2 years.
- Although governments have been slow in developing local asbestos action plans, reporting against the national targets has focused attention on key elements of the Asbestos National Strategic Plan.

2. Asbestos-related diseases

The aim of the Asbestos National Strategic Plan is to eliminate asbestos-related diseases in Australia by preventing exposure to asbestos fibres. The Mid-term Progress Report noted that asbestos-related disease (ARD) rates in Australia are not yet reducing and the impact of Australia's complete ban on asbestos, which has been in place for almost 20 years, is not yet obvious.

In the 2021–22 financial year, ASEA continued to review the latest information about ARDs in Australia to help assess the impact of past actions aimed at eliminating disease and to ensure current and future actions are evidence-based.

2.1 Monitoring asbestos related disease data in Australia

The Mid-term Progress Report provided information on the Global Burden of Disease (GBD) Study, which estimates 4,449 Australians died from ARDs in 2019, an increase of over 100 deaths since 2018. No further estimates have been released since that time.

Australian Mesothelioma Registry

The Australian Mesothelioma Registry (AMR) data from Mesothelioma in Australia 2021 shows a steady increase in the number of new cases of mesothelioma and that deaths from mesothelioma in Australia remain stable at approximately 700 per year.

The Mid-term Progress Report noted that in 2020 there were 642 cases of mesothelioma diagnosed, but this number has been adjusted to 790 due to a lag in reporting cases to the AMR.

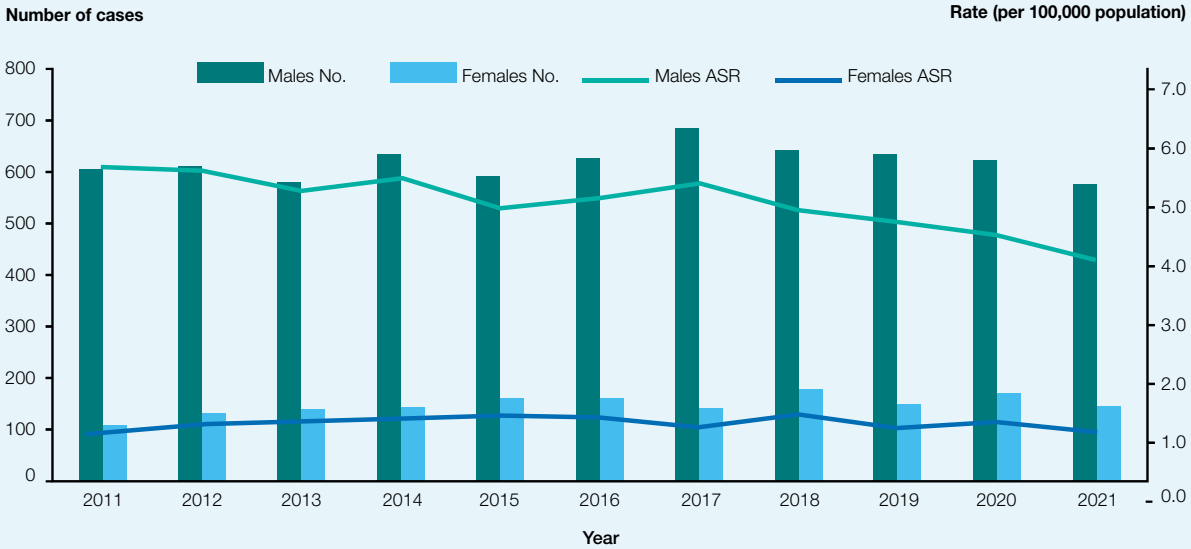
In 2021:

- **722 cases** of mesothelioma were diagnosed – the median age at diagnosis was 77
- **701 deaths** of people with mesothelioma were recorded – a mortality rate of 2.1 deaths per 100,000 population.

Because mesothelioma typically develops a long time after exposure, the majority of current cases reported to the AMR are likely to relate to occupational exposure in workplaces that occurred before current occupational asbestos regulations and practices came into effect.

There has been a decrease in the age-standardised rate of men diagnosed with the disease, while the age-standardised rate of women diagnosed has remained relatively steady (see Figure 1). As a result, the proportion of mesothelioma cases found in women is increasing.

Figure 1: Number and age-standardised rate (ASR) (per 100,000 population) of people diagnosed with mesothelioma, by year and sex, 2011 to 2021



Note: Rates have been age-standardised to the 2001 Australian Standard Population
Source: AIHW analysis of AMR data at 1 May 2021; Table A2 in Mesothelioma in Australia 2020—data tables.

Understanding asbestos exposure risks

Information collected from detailed exposure assessments carried out by the AMR indicates that both occupational and non-occupational exposure to asbestos are potential contributing factors to the development of mesothelioma cases reported to the registry. However, occupational exposure is by far the predominant exposure for men.

Most men had occupational exposure (either alone or also with non-occupational exposure), whereas conversely women had non-occupational exposure (either alone or also with occupational exposure).

Of the 1,067 people who recorded exposure, the percentage of women compared to men reporting non-occupational exposure was:

- 93% of women | 21% of men

Due to the long latency of ARDs, most asbestos-related deaths in Australia today are thought to be due to past occupational asbestos exposures that occurred before the introduction of asbestos bans and strict regulatory controls.[1,2] In this sense, identifying deaths from ARDs in Australia today tells us more about the effectiveness of past actions to eliminate these diseases, primarily through workplace regulatory reform, than about the effectiveness of current actions.

Low-level exposure

Current evidence indicates that Australians will continue to be exposed to legacy asbestos occupationally and non-occupationally, and continue to develop ARDs, without targeted action to prevent it.

It was first suggested by Landrigan in 1991 that industrialised countries (like Australia) were at the beginning of the 'third wave' of asbestos-related disease, which would occur in people repairing, renovating or demolishing asbestos-containing buildings.[3]

A small number of subsequent studies have looked further at the potential risk from a third wave of exposures.[4,5] Armstrong and Driscoll synthesised much of the available evidence relating to the third wave in their 2016 paper, Mesothelioma in Australia: cresting the third wave. In this paper, the authors define third-wave exposure as both occupational and non-occupational exposure to asbestos as a consequence of repair, renovation and demolition of buildings, and environmental exposure to asbestos.[6]

A House of Commons review of the United Kingdom's Health and Safety Executive's (HSE) approach to asbestos management published in April 20227, identified that more evidence is needed on current asbestos exposure levels. The review found increased rates of death from mesothelioma in women whose last occupation was education and teaching. It was recommended that the HSE systematically measure current asbestos exposures in non-domestic buildings, particularly schools and other public buildings.

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1 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. Available from http://ghdx.healthdata.org/gbd-results-tool

2 Australian Institute of Health and Welfare 2021. Mesothelioma in Australia 2020. Cat. no. CAN 143. Canberra: AIHW. Available from https://www.aihw.gov.au/reports/cancer/mesothelioma-in-australia-2020/summary

3 Landrigan PJ (1991). The third wave of asbestos disease: exposure to asbestos in place. Public health control. Introduction, Annals of the New York Academy of Sciences, 643:xv–xvi. doi:10.1111/j.1749-6632.1991.tb24438.x

4 Olsen NJ, Franklin PJ, Reid A, de Klerk NH, Threlfall TJ, Shllkin K and Musk B (2011). Increasing incidence of malignant mesothelioma after exposure to asbestos during home maintenance and renovation. Medical Journal of Australia, 195:(5)271–74. doi: 10.5694/mja11.10125.

5 Armstrong B and Driscoll T (2016). Mesothelioma in Australia: cresting the third wave. Public Health Research & Practice, 26(2):e2621614. doi: http://dx.doi.org/10.17061/phrp2621614.

6 See note 5

7 House of Commons Work and Pensions Committee. The Health and Safety Executive's approach to asbestos management. Published 21 April 2022. Available from https://committees.parliament.uk/work/1393/health-and-safety-executives-approach-to-asbestos-management/publications/

2.2 Reviewing evidence about asbestos as a cause of cancer

ASEA has continued reviewing evidence from the 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 that an agent can cause cancer in humans.

The last evaluation of the carcinogenicity of asbestos by IARC 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.[8]

While the IARC also observed associations in this monograph between asbestos exposure and cancer of the pharynx, stomach and colorectum, the evidence is limited and therefore not sufficient to establish a causal relationship to these cancers.[9]

The role of asbestos in causing these and other forms of cancer, such as renal cancer, continues to be the subject of ongoing investigations.[10,11]

IARC Advisory Groups meet periodically to review current evidence around carcinogenicity. The most recent meeting took place in March 2019 and resulted in a list of priorities for updating or developing monographs between 2020 and 2024. Based on the above-mentioned criteria, asbestos was not identified as a priority for re-evaluation.[12]

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8 International Agency for Research on Cancer (IARC) 2012. Monograph Volume 100C: Asbestos (Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite and Anthophyllite). Available from http://publications.iarc.fr/120

9 See note 8

10 Fortunato L and Rushton L (2015). Stomach cancer and occupational exposure to asbestos: a meta-analysis of occupational cohort studies. Br J Cancer,112(11):1805–15. doi: 10.1038/bjc.2014.599

11 Candura SM, Boeri R, Teragni C, Chen Y, Scafa F (2016). Renal cell carcinoma and malignant peritoneal mesothelioma after occupational asbestos exposure: case report. Med Lav,107(3):172–7. PMID: 27240221

12 International Agency for Research on Cancer. Report of the Advisory Group to Recommend Priorities for IARC Monographs during 2020–2024. Available from https://monographs.iarc.who.int/wp-content/uploads/2019/10/IARCMonographs-AGReport-Priorities_2020-2024.pdf

2.3 Research funding for asbestos-related diseases

Some grants awarded by government during 2021–22 include:

- The University of Western Australia was awarded $1.5 million by the National Health and Medical Research Council (NHMRC) to conduct clinical trials in mesothelioma to understand from patient tumour and blood samples why some people respond to treatment and others do not.
- The University of Western Australia was also awarded approximately $200,000 by Cancer Australia to identify new molecular targets for immunotherapy.
- The National Centre for Asbestos Related Diseases has a five-year grant (until 2025) worth $2.5 million from the NHMRC for its ongoing study into mesothelioma and lung cancer.
- The University of Melbourne was awarded a five-year grant (until 2025) to better understand the Hippo pathway and its role in mesothelioma and other human cancers.

Clinical trials that commenced in 2021–22 included a phase I interventional study to determine the safety and tolerability of a new medicine called IAG933 in patients with advanced mesothelioma and other solid tumours, which is anticipated to end in 2024.[13]

[13] See Clinical Trials Details (australiancancertrials.gov.au)

Key observations

- Trends in ARD data indicate that the proportion of women dying from ARDs has increased, and that both occupational and non-occupational exposures to asbestos are contributing factors in the mesothelioma cases reported to the AMR.
- It is generally accepted that exposure to asbestos from both occupational and non-occupational sources is at lower levels than has occurred through past occupational exposure. However, there is uncertainty about the risk posed by these lower levels of exposure to the development of ARDs, for example levels that are below current workplace exposure standards, including the effect of cumulative low-level exposures.[14,15]
- Addressing knowledge gaps around low-level exposure will inform an appropriate response to risk associated with third wave exposures and with exposure to ambient levels of asbestos.

[14] Goldberg M and Luce D (2009). The health impact of nonoccupational exposure to asbestos: what do we know? Eur J Cancer Prev, 18(6):489-503. doi: 10.1097/CEJ.0b013e32832f9bee

[15] Luberto F, Ferrante D, Silvestri S et al. (2019). Cumulative asbestos exposure and mortality from asbestos related diseases in a pooled analysis of 21 asbestos cement cohorts in Italy. Environ Health 18:71. doi.org/10.1186/s12940-019-0510-6

Next steps

- ASEA will continue to collaborate with experts to identify and address gaps in evidence that will enable a better understanding of the current risk posed by low-level exposure due to legacy asbestos. Any new evidence obtained through these collaborations can hopefully inform public and environmental health policies that are effective at controlling this risk.
- ASEA will continue monitoring data on asbestos-related diseases and promote research to improve treatment and prevention of asbestos-related diseases.

3. Asbestos awareness

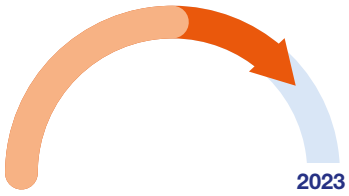
Priority 1 of the Asbestos National Strategic Plan aims to improve asbestos awareness with governments and community bodies collaborating to provide trusted, practical, easily understood and accessible information about asbestos risk in homes, workplaces and the environment. Target 1 relates to this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

3.1 Research on asbestos awareness and behaviour

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.



Progress against this target is primarily measured through surveys that gauge asbestos awareness levels, knowledge, attitudes and behaviour of the targeted cohorts. The Mid-term Progress Report showed awareness about the dangers of asbestos to health has been achieved, and there are improving levels of awareness that many homes built before 1990 contain asbestos. However, there was low awareness of simple ways to stay safe, including engagement of asbestos professionals and proper disposal methods.

National surveys

The Mid-term Progress Report noted that in 2021–22 ASEA would conduct a follow-up COVID-19 pandemic home improvement survey.

A 'home improver' is anyone undertaking home improvement projects from small maintenance or improvements to large renovations – including those who outsource all or some of the project.

- The survey conducted in 2020 found that 57% of Australians considered themselves 'DIYers' compared to the results in 2021 which found 67% of Australians considering themselves 'home improvers', split evenly between do-it-yourself renovators (DIYers; 51% of home improvers) and those who outsource most or all of the renovation (49% of home improvers).

COVID-19 pandemic home improvement 2021 survey results

Quantitative research

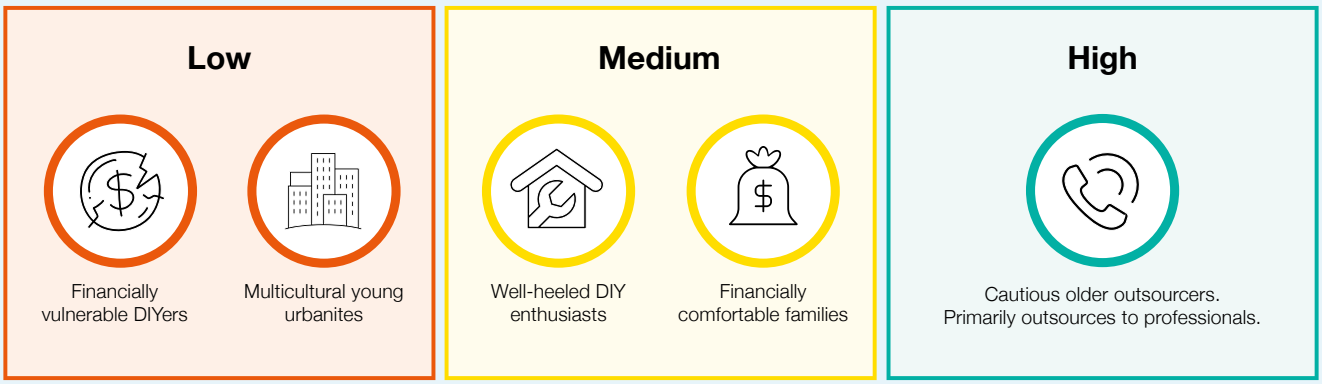
In August 2021, an online survey was conducted by SEC Newgate Research with home improvers to gain a better understanding of the asbestos knowledge, attitudes and behaviors of various segments within this cohort.

The research was designed to compare results and analyse change from the survey on asbestos and DIY activities conducted in 2020; however, the scope was broadened to include all home improvers rather than those that engaged solely in DIY projects.

This research also included a latent class analysis, yielding 5 distinct segments based on clustering similar demographic, socioeconomic, behavioural and attitudinal traits (see Figure 2). The segments consisted of:

- **Financially vulnerable DIYers** who tend to consider it less important to know about asbestos and are also less likely to agree that asbestos can cause harm – coupled with their propensity to DIY – this makes them the most at-risk segment.
- **Multicultural young urbanites** feel less knowledgeable about asbestos than others. They are the second most at-risk segment of all. They are also the most likely segment to say they have never heard of asbestos before or feel they don't really know anything about it.
- **Well-heeled DIY enthusiasts** who have a strong affinity for home improvement – specifically undertaking DIY projects as a hobby – working on home improvement projects of all types. They sit in the middle in terms of most at risk as they constantly engage in home improvement projects themselves.
- **Financially comfortable families** who can be considered a 'middle of the road' home improver, with an even preference for both DIY and outsourcing, depending on the project type. They are more likely than other segments to have worked on all project types.
- **Cautious older outsourcers** who skew older than the other segments (aged 55+ years), likely retired and living in regional or rural areas with all children having left home. Their financial comfort allows them to hire professionals to complete large and small projects. This segment has stronger levels of asbestos awareness and knowledge than all the other segments.

Figure 2: 2021 Asbestos Safety Home Improvement Survey – Quantitative survey – Asbestos awareness and knowledge amongst home improver segments



Levels of awareness and knowledge related to how and when ACMs are dangerous, where ACMs can be found in the home, and how to stay safe and manage ACMs if found during a project.

Qualitative research

To gain a deeper understanding of the segments identified in the 2021 quantitative study, a follow-up qualitative study conducted by ThinkPlace Australia used interviews and focus groups to gauge if there were demographic differences that impact attitudes and behaviours towards asbestos safety.

The same demographic data and definition of the segments used in the quantitative study were adopted for the qualitative study to seek participants. However, there was a slight difference in how these segments are referred to in the qualitative study. Specifically:

- comfortable urban families captured both the 'well-heeled DIY enthusiasts' and 'financially comfortable families' segments
- Culturally and Linguistically Diverse (CALD) home improvers captured the 'multicultural young urbanites' segment
- financially vulnerable home improvers captured the 'financially vulnerable DIYers' segment.

Another point of difference to note in the segmentation of the qualitative study is the exclusion of the cautious older outsourcers segment. This segment was excluded to prioritise the more at-risk segments with lower awareness and who were less likely to engage professionals to assist with their home improvement projects.

Qualitative research findings

The findings from the qualitative research were consistent with the findings from the quantitative research and provided a unique insight into the demographic differences of each segment.

Financially vulnerable DIYers indicated that they rely on messaging that was informative and offered clear steps that should be taken. They are likely to complete further research online and benefit from clear direction on where to access further information.

In contrast, the well-heeled DIY enthusiasts and financially comfortable families tend not to apply their existing knowledge about asbestos risk to their current project, particularly if it is a small, one-off project. The risks of encountering ACMs during a project are not front-of-mind, even though they are aware asbestos is or might be present in their home. Messaging should therefore act as a reminder to trigger their current understanding and act on the knowledge they already have. As they complete multiple projects at the same time, they have reliance on information that is accessible and does not require further research.

The findings for the multicultural young urbanites were in line with the quantitative research demonstrating that this segment feels less knowledgeable about asbestos when compared to the other segments. They rely heavily on the advice from professionals as they do not have the knowledge themselves on identifying potential ACMs. This results in ACMs being detected later in the project. Their preference included messaging that was informative on common locations of ACMs, while also reminding them about the health implications.

2022 National asbestos awareness survey

In early 2022, SEC Newgate Research was engaged to conduct a national survey of cohorts in Target 1 not previously surveyed (see Figure 3). The 3 cohorts sampled in this survey were:

- homeowners and occupiers – focusing on key household decision makers
- workers in workplaces with ACMs – focusing on those who work in sectors with a high prevalence of older government-owned buildings
- tradespersons whose work brings them into contact with ACMs.

Figure 3: 2022 National Asbestos Awareness Survey – Key indicators of asbestos awareness levels in Australia

	Increasing the awareness and knowledge of health risks of ACMs			Increasing awareness of where to source information	
	% that know at least a little bit about asbestos health impacts	% that are aware that the poorer the condition of ACM, the higher risk to health	% that are aware that the health impacts of asbestos are not immediately noticeable	% that know at least one source they would turn to if they needed information about asbestos	% that know at least one government source they would turn to if they need information about asbestos
Household desicion-makers	81%	71%	58%	92%	59%
Workers in key sectors	79%	67%	54%	94%	56%
Tradespeople	89%	75%	70%	98%	53%

Jurisdictional surveys and research

Victoria

In September 2021 the Latrobe Valley Asbestos Taskforce (LVAT) conducted their third annual awareness survey to track changes in the level of awareness, knowledge and attitudes towards asbestos across the Latrobe Valley community. The overall findings from this survey highlight the need for consistent messaging to increase awareness of the risks of asbestos exposure, especially among DIY home renovators.

The headline results of this survey were:

- 92% agreed that asbestos is very common in Australian buildings
  - increase from 88% in 2020 and 87% in 2019
- 85% agreed that even a small exposure to asbestos can be very dangerous
  - increase from 83% in 2020 but decrease from 89% in 2019
- 95% agreed that anyone doing renovations needs to be very mindful of asbestos
  - slight decrease from 96% in 2020 and 98% in 2019
- 89% agreed is it important to know about asbestos and its related dangers
  - significant increase from 51% in 2020 and 71% in 2019
- 74% rated their knowledge of asbestos-associated dangers as good or very good
  - increase from 65% in 2020 and 71% in 2019
- 23% were confident or very confident in their ability to identify materials that may contain asbestos
  - decrease from 30% in 2020 and 39% in 2019.

The results have been used by LVAT to develop education and awareness tools and campaigns to improve understanding of the dangers of asbestos exposure across the community, particularly in the residential setting.

New South Wales

In October 2021, the Environmental Protection Authority (EPA) published social research to provide guidance on how to increase safe and lawful behaviour in home maintenance and renovation situations, up to the point of removal of asbestos waste. The research comprised of a survey of 4,063 NSW community members, and group discussions and in-depth interviews with more than 100 people from relevant professional and non-professional audiences.

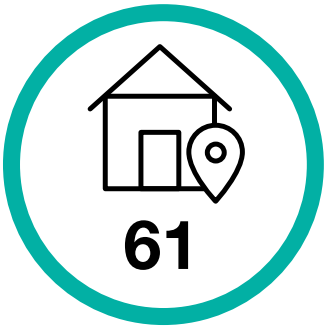
3.2 Asbestos awareness campaigns

2021 National Asbestos Awareness Week

National Asbestos Awareness Week (NAAW) was held from 22–28 November 2021 and asked Australians to *Think Twice About Asbestos*. The aim of this campaign was to raise awareness among the public and key trades of the health risks associated with exposure to asbestos fibres, where asbestos products can be found and why they should use qualified asbestos professionals. Campaign messaging was translated for CALD communities into 6 languages, with Hindi and Indonesian added to the language groups that featured in the previous year's pilot (Arabic, Cantonese, Mandarin and Vietnamese), and delivered to CALD communities primarily through social media platforms (See Figure 4 on following page).

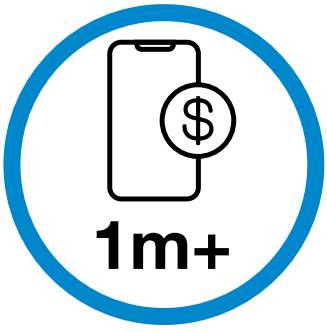
Key campaign results

government and non-government organisations used ASEA's **campaign advertising pack**

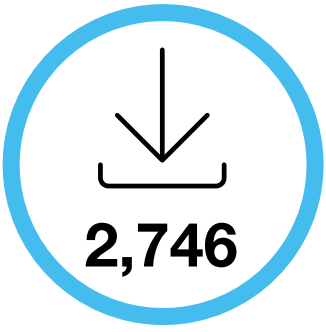


local councils used campaign materials during NAAW, triple that of 2020

broadcast audience reached through **187 media placements** across radio, newspaper, online news and TV

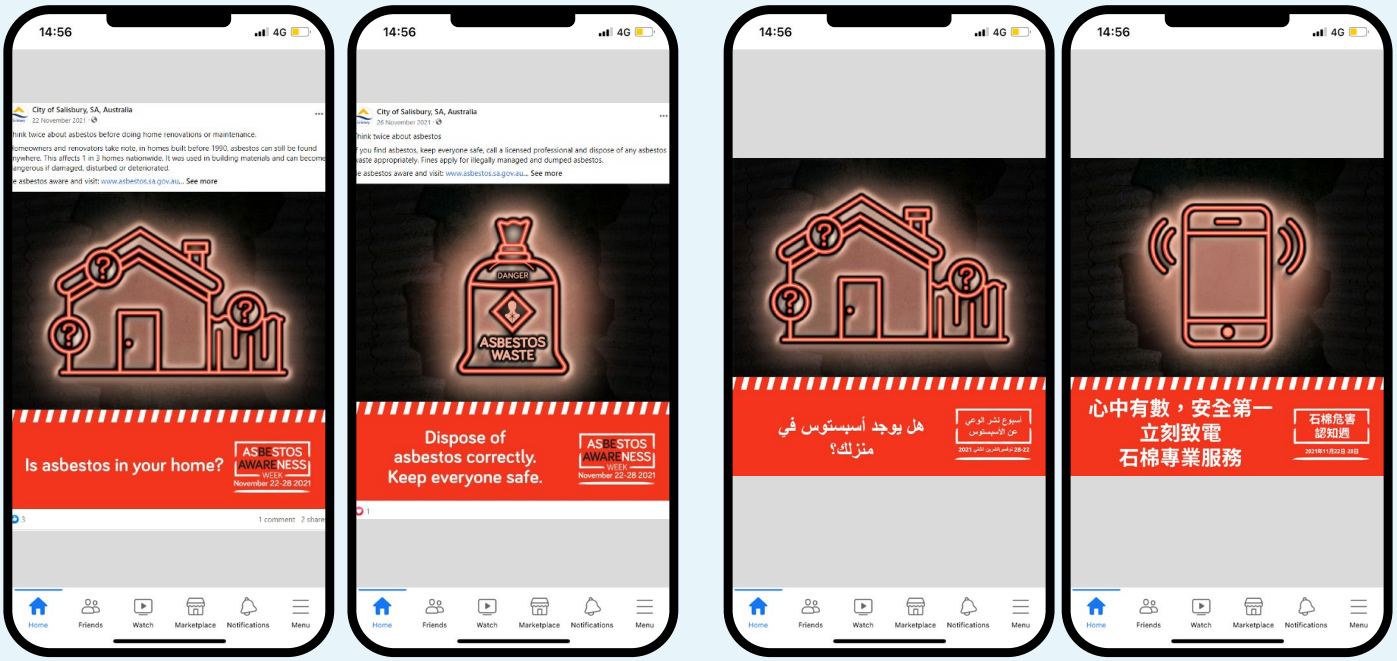


reached through **paid social media**



CALD organisations were sent the social media pack, with **101 packs downloaded by CALD organisations** nationally

Figure 4: 2021 National Asbestos Awareness Week – Social media including CALD assets



The large reach that the campaign achieved across the Australian population – particularly in the targeted groups of homeowners undertaking DIY, tradespersons, and CALD communities – demonstrates the campaign's success at getting asbestos on the radar of the Australian public.

Examples of 2021 NAAW activity in jurisdictions

- WorkSafe Victoria ran a paid-media campaign during the month of November targeting domestic tradespeople, particularly carpenters, electricians, plumbers and floorers. The paid digital advertising component of the campaign gained 5.7 million impressions, as well as the Asbestos in Victoria website receiving 39,000 unique visits, with 29,249 visits to the 'find and identify tool'.
- Queensland held asbestos awareness events during NAAW and social media advertising targeting home renovators, a webinar for tradespeople providing practical guidance on working safety around asbestos, and advertising in construction industry magazines.
- New South Wales used AV screens in 109 Service NSW offices across the state to play a 15-second DIY animation video, 4 times an hour, or 28 times a day throughout NAAW, with an estimated 88,133 total impressions.
- South Australia and Tasmania held a 'Management of Asbestos' interactive webinar with their stakeholders.
- Australian Government departments and agencies conducted awareness-raising activities appropriate to their respective remit. During NAAW, Comcare used social media to promote and raise awareness of its asbestos safety resources.

Bunnings magazine

Bunnings is Australia's leading hardware chain and one of the country's most trusted brands. Each month 500,000 copies of the Bunnings magazine are distributed in-store nationwide, and 1 in 2 Australians shop at Bunnings every 4 weeks. Bunnings have identified their main readers as homeowners, accounting for 1.114 million of their readers.

Advertising and advertorial content was placed in the Bunnings magazine for the month of November (Figure 5). This extended the reach of the 2021 NAAW campaign materials and messaging, increased traffic to further information on ASEA's website, and directly targeted homeowners engaging in home improvement projects.

Figure 5: Bunnings Magazine – November 2021 – Advertisement and advertorial

Disclosure of asbestos in residential property

In June 2022, ASEA conducted a digital media campaign targeting residential property buyers, sellers, renters and landlords to promote the disclosure of asbestos at point of sale or lease.

This campaign was developed in response to findings from the 2020 Real Estate Agents and Property Managers Survey (results reported in Mid-term Progress Report), as well as research identifying how varied the current disclosure requirements across Australia are and what the optimal methods for disclosing asbestos presence should be. It also addressed a finding that intervention is required earlier than at the point of renovation, improvement or maintenance.

New resources were developed including an asbestos disclosure tool for real estate agents and property owners to inform potential buyers or renters about the dangers of asbestos, where it can be found and what action to take (see Figure 6). A pack containing these resources was distributed to stakeholders in the real estate industry, as well as members of the ASEA's working groups, committees and the Asbestos Safety and Eradication Council.

Figure 6: Asbestos disclosure tool

Paid advertising

A total of $45,000 was spent on the media component of the asbestos disclosure campaign. This was the first time paid advertising was used to deliver a specific, targeted social media campaign. Seen as a pilot, the outcomes of this campaign will inform subsequent social media campaigns. Campaign results are shown in Table 2.

The campaign consisted of educational videos about asbestos in homes – one targeted at buyers and sellers, and a second targeting landlords and renters – as well as advertising materials, including 3 15-second animated advertisements and social media tiles (Figure 7).
The delivery of this campaign involved 2 components:

- a digital advertising campaign for 2 weeks from Friday 17 June – Friday 1 July 2022
- the distribution of a stakeholder pack which was also made available online and via email to over 100 stakeholders.

Figure 7: Asbestos disclosure – Social media

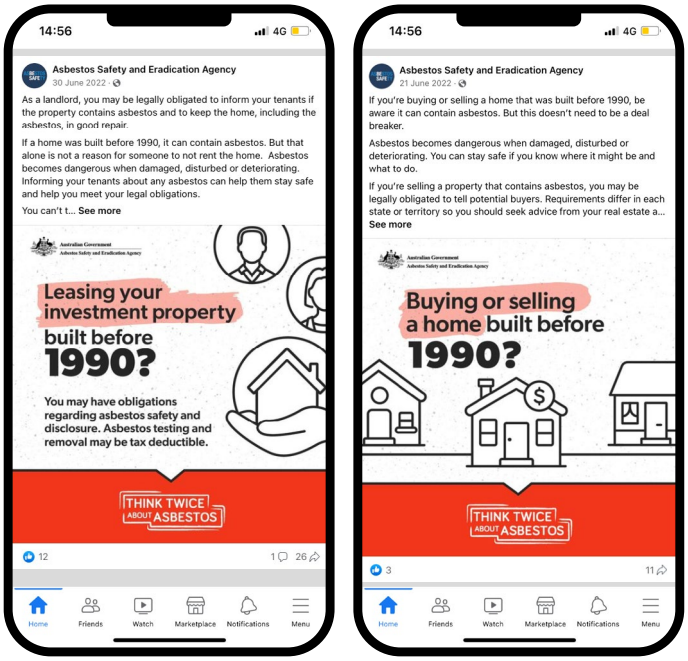


Table 2: Asbestos disclosure campaign results

Paid Advertising

Social media

- reached over **847,000** people across the Facebook network

Digital display

- viewability **88%**
- Australian Government benchmark 70%

Digital video

- completion rate **90%**
- Australian Government benchmark 85%

Public Relations (earned media/editorial)

- **89** total media hits
  - 48 radio, 38 online, 3 print
  - expected hits = 20-30
- **2.4 million** people potentially reached

Website

- traffic to ASEA's website increased by **68%** from 8,779 users in May 2022 to **14,727** users in June 2022.
- top page for the month: *Disclosure of asbestos in residential property* landing page.
- factsheets, property disclosure tool, informational videos and stakeholder pack received a high number of views and downloads.

New South Wales – ‘Be Asbestos Ready’

From April to July 2022, the NSW EPA, on behalf of the NSW Asbestos Coordination Committee (NACC), launched a state-wide asbestos awareness campaign titled ‘Be Asbestos Ready’ (Figure 8). The total campaign spend (including campaign development and delivery) was $520,000. See Table 3 for campaign results.

The campaign was aimed at ensuring people at high risk of exposure to asbestos know how to stay safe.

Wave 1 of the campaign (April to June 2022) consisted of paid digital advertising – online video, social and digital display including on CALD platforms, and out of home (OOH) advertising (i.e. outdoor) placed near Bunnings stores and radio. Wave 2 in June 2022 included enhanced social media communication targeting DIYers. A follow up survey in June 2022 post-wave 2 result showed increased awareness.

The campaign prompted audiences to plan for the possibility of finding asbestos during a renovation/ maintenance project, normalise preparation ahead of starting such a project, and increase confidence in knowing how to deal with asbestos. NSW EPA also created an editable stakeholder pack with a range of digital, print, and written assets that used materials developed by ASEA for the 2021 NAAW campaign.

Figure 8: NSW Government ‘Be Asbestos Ready’ – Social media

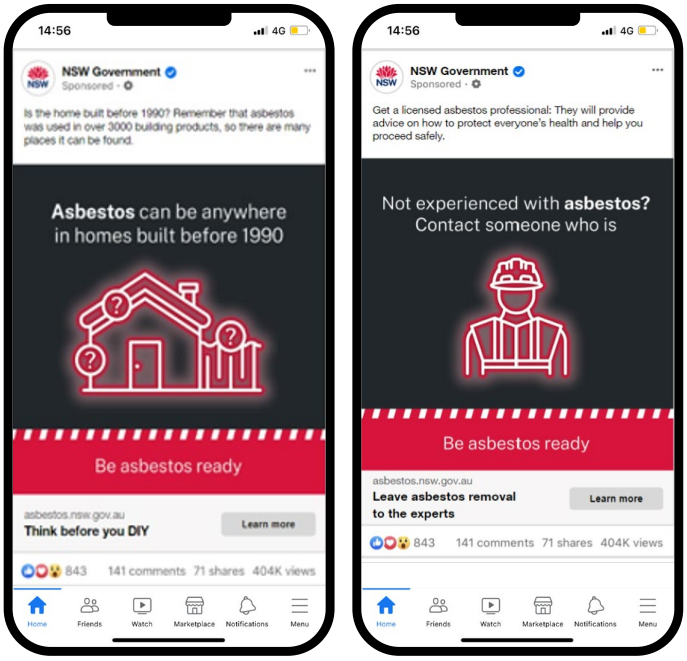


Table 3: ‘Be Asbestos Ready’ – Campaign results

Paid Advertising

Key metrics

A study was conducted to track the performance of the first wave of the campaign using a series of key metrics to measure baseline awareness. Wave 2 top line data has been used to measure progress made on these key metrics.

Creative concepts delivered and exceeded all advertising specific metrics.

- **1 in 5** people could recall seeing the campaign after 6 weeks
- Traffic to NSW Government’s website (asbestos.nsw.gov.au) **tripled** while the campaign was active

1. Awareness that exposure to fibres from damaged/deteriorating/disturbed asbestos can cause cancer:
   - benchmark = 60%
   - wave 2 result = **63%**
2. Awareness that homes built/ renovated before 1990 may contain asbestos:
   - benchmark = 74%
   - wave 2 result = **77%**
3. Awareness that planning ahead before doing work can reduce risk of exposure:
   - benchmark = 70%
   - wave 2 result = **76%**
4. Prevent yourself from being exposed to asbestos when undertaking a home improvement project or construction job:
   - benchmark = 35%
   - wave 2 result = **35%**
5. Where ACMs can be found:
   - benchmark = 32%
   - wave 2 result = **32%**

Victoria – 'Breathtaking Renovations'

In September 2021, the Latrobe Valley Asbestos Taskforce (LVAT) worked with a behaviour change production company to produce the 'Breathtaking Renovations' video accompanied by a 30-second television commercial (see Figure 9 and Table 4). This commercial was broadcast throughout Gippsland for a 6-week period from September – October 2021, and for 4 months from 1 March – 30 June 2022.

Figure 9: Breathtaking Renovations – Do you want a home that's to die for?

Table 4: 'Breathtaking Renovations' – Campaign results

Video views	2022 LVAT survey results
Since its launch, the Breathtaking Renovations video has received **513,250 online views** across YouTube, Facebook and Instagram (as of 30 June 2022).	• **49%** (i.e. nearly half) of all respondents said they had seen either the television commercial or the online video • Of these: — **27%** said they were now 'much more likely' — **21%** said they were now 'more likely' to stop and think about where asbestos could be in their home after viewing it

During the reporting period, the LVAT also:

- published a guide '*Who does what in asbestos*' to help the community understand which government agency is responsible for asbestos-related complaints or concerns
- released a factsheet on asbestos duties for business
- continued to raise awareness using survey data via weekly posts to social media.

3.3 Asbestos education and training

ASEA investigated the adequacy of current WHS asbestos awareness training and options to address identified issues. The research was carried out in response to ongoing stakeholder concerns that current requirements are not adequate to protect the safety of workers, particularly those new to relevant trades. ASEA released a discussion paper in October 2021 and invited submissions over an eight-week period.

Most submitters categorised current asbestos training requirements as inadequate, causing confusion for duty holders when choosing appropriate training and a consequent risk to workers. The clear feedback was that workers should be trained before potential exposure to risk and that training was needed for apprentices and all workers in a wide range of occupations where asbestos exposure is a risk. Nationally recognised training was preferred over unaccredited training, and the current Australian Capital Territory (ACT) approach of mandatory asbestos awareness training is the preferred model for national reform.

In the ACT it is mandatory to do a specified nationally accredited course in asbestos awareness for:

- any worker whom a person conducting a business or undertaking reasonably believes will work with asbestos or ACMs
- workers in occupations which have been declared by the relevant ACT Minister (these are all construction-related trades).

A report, Outcomes of asbestos awareness training consultation, was released in May 2022 summarising the insights gained from the 20 submissions received.

Implementing this reform will require agreement of Safe Work Australia members to amend the model WHS laws. The outcomes of this consultation have been referred to the Chair of Safe Work Australia with a request they be progressed in that forum. The outcomes have also been drawn to the attention of maritime organisations with health and safety responsibilities as offshore workers face similar asbestos exposure risks.

Key observations

- Research is showing an increased awareness and knowledge of the health risks of ACMs and where to source information. There is also an improving level of awareness that asbestos is common in Australian buildings. However, homeowners and occupiers are not a homogenous group and show differing levels of awareness across different segments.
- It is evident from the quantitative and qualitative 2021 Asbestos Safety and Home Improvement Research that a one-size-fits all messaging model is not effective in raising awareness and changing behaviour. The format, delivery and timing of the message needs to ensure they are seen by the intended audience through their preferred information source.
- Awareness campaigns are more effective on social media with the use of programmatic targeting of specific segments, as demonstrated with the ASEA asbestos disclosure campaign, the NSW and Victorian campaigns.

Next steps

- Conduct a targeted national advertising campaign on asbestos safety and evaluate its effectiveness in raising awareness levels.

4. Asbestos identification, management and safe removal

Priority 2 of the Asbestos National Strategic Plan aims 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.

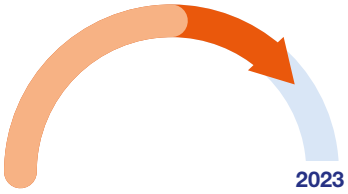
Priority 3 aims to ensure there are risk-based schedules and processes in place for safe prioritised removal of ACMs. Target 3 relates to this priority.

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, land and infrastructure



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. No significant changes have occurred since the Mid-term Progress Report in relation to the 3 key mechanisms by which this target is measured:

1. Format of asbestos registers, i.e., whether registers are static paper-based documents or electronic systems:
   - Governments reported that their asbestos registers are mostly electronically stored and are often part of an asset management or safety management system. Hard copies may be generated on site for practicality purposes.
2. The extent to which asbestos registers are centralised and accessible:
   - Asbestos registers are centralised or partially centralised in Victoria, Northern Territory, Queensland and South Australia.
3. The extent of consistency in asbestos risk levels to enable whole-of-government assessment of risk and a coordinated approach to remediation:
   - Governments using centralised asbestos management systems were more likely to report using the same risk ratings across their assets.

The Victorian Asbestos Eradication Agency (VAEA) consolidates and updates asbestos registers for approximately 13,000 Victorian government owned buildings in the Asbestos Identification and Rating System (AIRSystem). During 2021–22, the VAEA developed and tested an interface allowing occupational hygienists to enter the results of an asbestos survey directly into the AIRSystem.

The Northern Territory Government maintains an online portal system with registers for over 5,000 buildings. A consistent system of risk ratings is built into the system software. The presence of asbestos is confirmed or presumed in 1,974 buildings and 16 sites have had all asbestos removed.

During 2021–22, the Northern Territory Government began installing QR codes at sites with a register so they can be accessed at any time and identified other measures to improve functionality of their online portal including improvements in the management of asbestos in agency leased buildings. The Northern Territory Government is also establishing a panel to ensure suitably qualified asbestos professionals are accessible when required, and reviewing government processes to ensure safety standards and community expectations regarding asbestos management are met.

In Queensland, electronic registers for approximately 11,700 government-owned and controlled sites are centralised in the Built Environment Materials Information Register (BEMIR). This excludes sites owned by 3 government departments. Consistent risk ratings are applied for facilities included in the BEMIR and agencies are responsible for ensuring obligations around periodical asbestos inspections are met. QBuild provide an asbestos audit service for agencies that request it.

During 2021–22, the South Australian Government awarded its Across Government Facilities Management Arrangement (the Arrangement) to Ventia Services Group Limited (Ventia). The Arrangement covers approximately 40 government agencies including hospitals, schools and police stations. The transfer of asbestos records formerly held in the South Australian Government's Strategic Asset Management Information System (SAMIS) for those agencies to Ventia's Panorama system was in progress during the reporting period. Ventia will be responsible for register centralisation and coordinating a whole-of-government approach to ACMs for agencies covered by the Arrangement.

In other jurisdictions, asbestos registers are commonly centralised at agency level. For example, the Tasmanian Department of Health reported that, over the last 5 years, it has invested in implementing and maintaining a centralised electronic asbestos register system for around 443 buildings. Following initial assessment of all these built assets, it is now able to update information in real time as part of regular reviews of the assets.

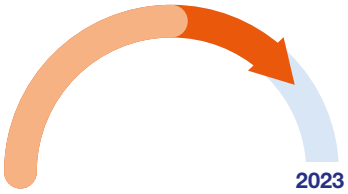
The Australian Government maintains and holds asbestos registers and management plans at the department or agency level, which are generally accessible to all staff. Most agencies report using consistent risk ratings to enable a coordinated approach to remediation. Some also provide paper-based copies of registers on site.

The ACT Government is considering ways to centralise its asbestos registers and management plans across its 451 sites that have registers. During 2021–22, ACT Property Group (ACTPG) – with direct responsibility for 272 government owned and leased buildings – engaged a commercial entity to complete 57 hazardous material reports as part of the ACTPG's planned 5-yearly assessment program for sites.

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 centralised registers (Target 2). This includes setting timeframes for removal, preparing work schedules, allocating funds, and setting up systems to engage appropriately qualified contractors.

Victoria remains the only jurisdiction that has a state-wide schedule for the prioritised removal of asbestos from government owned buildings. During 2021–22 the VAEA completed the first tranche of removing the most hazardous ACMs from Victorian Government owned buildings. These ACM removals included many regional TAFEs, important cultural assets such as State Library Victoria and state-owned community buildings run by committees of management including public halls, recreation, coastal and conservation reserves, and caravan and camping parks. The VAEA's prioritised asbestos removal program will lead to an increase in the removal of ACMs.

In other jurisdictions individual departments and agencies are responsible for planning asbestos removal work and funding this work from their budget allocations. The SA Government continues to provide the Asbestos Removal Fund ($1.1 million per annum) for asbestos removal projects in government buildings.

Australian Government agencies have adopted a risk-based approach to asbestos management and removal, which is generally implemented across the portfolio where required. For example, the Australian Nuclear Science and Technology Organisation (ANSTO) has developed an Asbestos and Hazardous Material Remediation and Management Plan based on risk priority identified in its Hazards Register, enabling a risk-ranked focus for removal and remediation activities.

The ANSTO is developing a tender to identify a pool of appropriately qualified independent asbestos removal professionals to complete removal works in accordance with risk prioritisation.

The Department of Defence has a rolling three-year program of asbestos remediation works based on condition reports and adopts risk-based prioritisation. When accessible friable asbestos is identified during monitoring and inspections it is removed as a matter of urgency. All asbestos removal work on the Defence estate is conducted by licensed asbestos removalists and is overseen by independent licensed asbestos assessors. Additional reactive asbestos inspections are undertaken after events such as storms or fire damage. ACMs that have deteriorated and become high risk following such events are prioritised for removal and disposal.

Individual NSW agencies are responsible for assessing risk and establishing their own asbestos removal programs, however, the NSW Government's mandatory contract for Waste Management covers asbestos disposal. Further, Local Government NSW has established the 'Asbestos Removal, Remediation Works and Associated Services' panel for government agencies and local councils requiring asbestos removal services.

The ACT government has established a panel of suitably qualified and licensed asbestos contractors for use by all government agencies. Asbestos management and removal programs are developed to meet applicable work health and safety obligations.

Asbestos in schools

As highlighted in the Mid-term Progress Report, schools continue to be a focus of large-scale removal programs for most governments.

For example, the ACT Education Directorate has a schedule for the removal of hazardous materials, including asbestos. The Directorate, responsible for 71 of the 451 ACT Government sites, was allocated $15 million over 4 years (starting in 2021–22) for the targeted removal of hazardous materials in schools. There is a risk-based approach to the prioritisation of these projects that differs with each material (i.e. lead paint) but is also largely determined by the risk rating in assessors' reports. The prioritisation methodology also considers maximising the benefits of undertaking certain types of works, that is, funding can be efficiently used by replacing lead painted, single glazed windows with asbestos containing glazing putty with new double glazed, thermal window units that remove multiple hazardous materials, while contributing to carbon reduction targets and improved comfort.

During the 2021–22 financial year, 989 work orders were issued relating to the inspection, testing and remediation of hazardous materials within ACT Government school sites or buildings under the control of the Education Directorate. All ACT schools have hard copy asbestos registers with centralised records held in the Education Directorate.

4.2 Asbestos in commercial workplaces

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

Target 5 aims 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.

Progress against this target was not measurable in the Mid-term Progress Report due to a lack of data.
In the 2021-22 reporting period some WHS regulators were able to report on compliance activities associated with asbestos registers and management plans at workplaces. Table 5 indicates a lack of compliance in some workplaces with the duties to maintain and implement asbestos registers and management plans.

Table 5: Work heath and safety regulatory activity associated with asbestos registers and asbestos management plans during 2021–22

New South Wales	Safework NSW issued 32 notices relating to asbestos registers and management plans. Nineteen of these notices related to asbestos management plans and 13 notices related to asbestos registers.
Northern Territory	NT WorkSafe is planning to commence a compliance campaign targeting asbestos registers and asbestos management plans in commercial buildings in 2022–23. Commercial buildings leased to the NT Government have a high level of compliance although some challenges remain for leases in remote locations.
Queensland	Seventy-six statutory notices were issued specifically relating to asbestos registers and asbestos management plans: — 69 improvement notices, 6 prohibition notices, 1 infringement notice. In addition, 2 immediate compliance notices were issued, where the identified hazard was rectified prior to the inspector leaving the site. Annual statewide compliance campaigns will be conducted from 2022–23.
South Australia	Ninety-five audits of workplaces completed with 55 workplaces found to be non-compliant (58%) resulting in improvement notices issued for: — not having an asbestos register (31) — not having an asbestos management plan (9) — no labels indicating presence of asbestos (11) — ACM not maintained (7) — asbestos register not maintained (6) — asbestos register not readily available (3). In addition, 5 subsequent notices were issued requiring preparation of an asbestos management plan.
Tasmania	The WHS regulator assessed compliance as high with minimal notices issued for failure to have an asbestos register in the reporting period.
Victoria	Twenty-two improvement notices were issued regarding asbestos identification and non-compliant registers.
Western Australia	Eleven notices were issued as part of the retail and accommodation compliance campaign to address non-compliance with requirements for asbestos registers and management plans.

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

National Residential Asbestos Heatmap

The Mid-term Progress Report outlined the systematic approach ASEA was taking to achieve Target 9, commencing with a residential asbestos cement roof hotspots study. Data generated in this study was subsequently combined with other residential asbestos information to develop a National Residential Asbestos Heatmap that predicts the probability of asbestos presence by geographic areas across Australia.

ASEA collaborated with consultants Tetra Tech Coffey and academic researchers from the UNSW City Futures Research Centre to complete the first version of the heatmap in June 2022. This project represents a first not only for Australia, but also internationally.

Residential asbestos data and information is limited, and what does exist is disparate and dispersed. Artificial Intelligence (AI) was used to overcome these issues by centralising all available property-level residential asbestos data and collating it into 2 categories that confirmed either asbestos presence or absence. Property-level data was then aggregated to the Statistical Area 1 (SA1) level, an Australian Bureau of Statistics (ABS) geographical standard that describes the social, demographic and economic characteristics of a population size of approximately 200 to 800 people, while maintaining their privacy. Aggregation at the SA1 level provided approximately 73% coverage of Australia. SA1s without data were statistically well represented by SA1s with data, meaning data could be generalised where it was lacking.

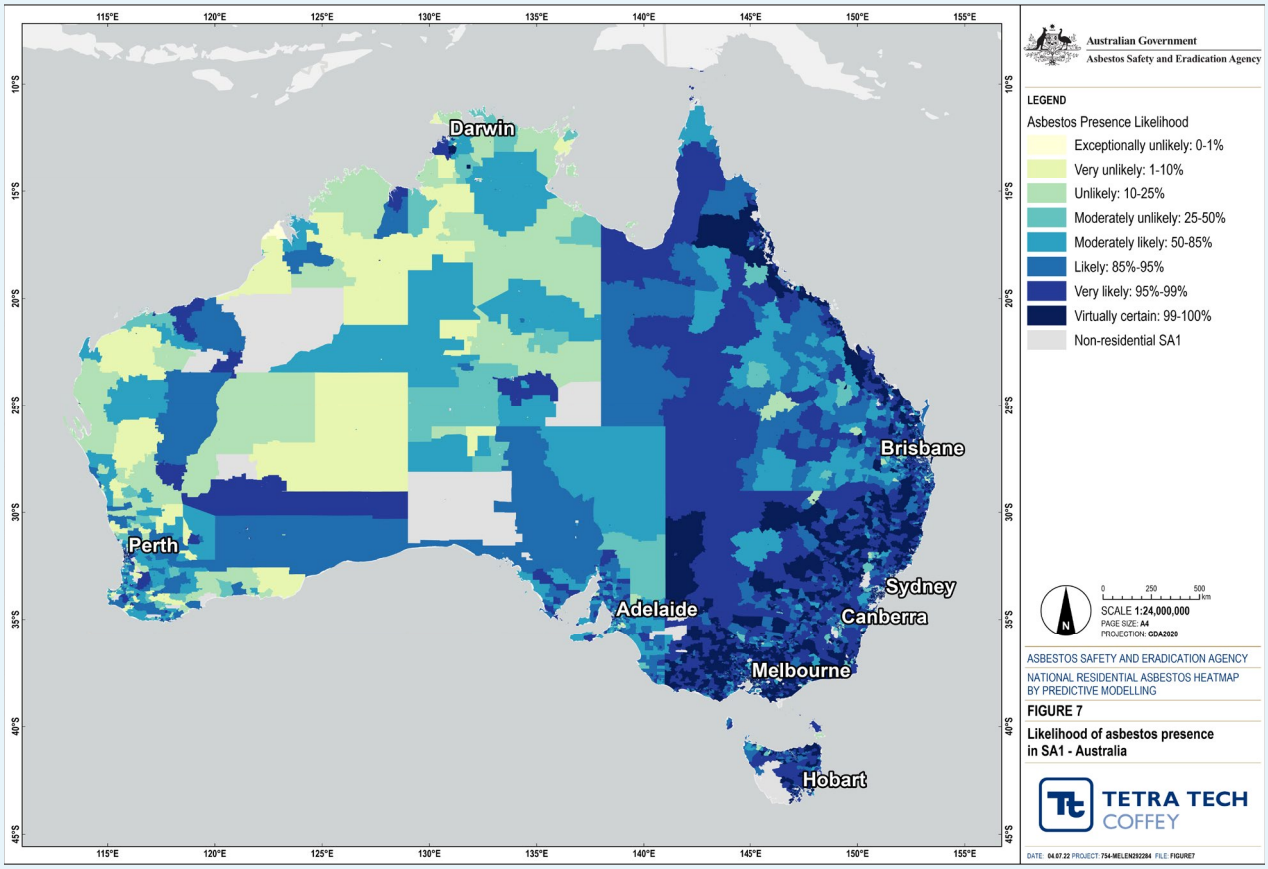
Asbestos presence and absence data were then combined with publicly available predictor variables covering various structural, economic and demographic attributes (e.g. ABS datasets and data from Geoscience Australia's National Exposure Information System). This served to provide an understanding of the broader characteristics that describe asbestos presence compared with asbestos absence. The combined asbestos and predictor data were used to train the predictive model using a machine-learning algorithm.

Figure 10 (following page) shows the heatmap at the full national scale. An 8-point scale is used to define the likelihood of asbestos presence, from exceptionally unlikely (<1%) all the way up to virtually certain (>99%).

Overall, approximately 60% of SA1s across Australia are predicted to have asbestos presence in the residential environment with a greater than 99% probability. Because SA1s by design have similar population levels, this means that approximately 60% of the Australian population lives in areas that have a greater than 99% probability of asbestos presence.

The heatmap is hosted online in a secure WebGIS platform, allowing authorised users to access the significant amount of underlying data that supports it. The variables that went into defining the probability of asbestos presence for each SA1 can be used to profile geographic areas of interest. These include, for example, the total population, the number of homes built before 1990, the residential building footprint, the proportion of the population with low-income levels and the proportion of culturally and linguistically diverse or Indigenous community members.

Figure 10: The national residential asbestos heatmap



Detailed interrogation and analysis of the heatmap data can guide asbestos policy and strategic planning at national, state and local government levels. It can improve residential asbestos risk management by assisting with:

- asbestos safety awareness-raising where it is needed
- targeting compliance activity
- planning resources for safe removal
- identifying optimal locations for future asbestos disposal facilities
- supporting disaster resilience, response and recovery.

Estimating the volume of legacy asbestos in the Latrobe Valley

In March 2022, the Latrobe Valley Asbestos Taskforce published Estimating the volume of legacy asbestos in non-residential properties across the Latrobe Valley region – A model undertaken to estimate the total amount of legacy ACMs in the area to help increase awareness of it prevalence. The study estimates that 43% of all non-residential properties in the 3 municipalities studied have ACMs. The total volume of this legacy ACM is estimated at 1.9 million square metres, almost 90% of which is asbestos cement sheet. This report is a companion to Estimating the volume of residential asbestos remaining in the Latrobe Valley – A model published in 2020, which estimated 74% residential properties in the area have ACMs, the total volume of which is over 3.1 million square metres.

Key observations

Government owned assets

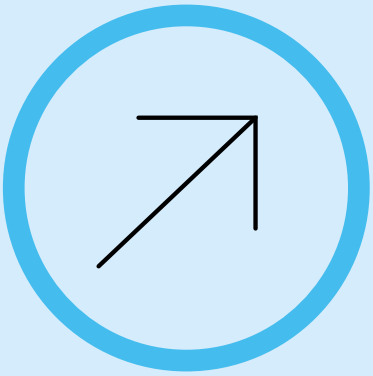
- Although all governments are identifying and assessing the risks associated with ACMs in their assets, this process is still mostly decentralised. However, with the use of technology, effective centralisation of the information is possible and individual agencies and departments can continue to manage their own asbestos registers and risk assessments.

Commercial buildings

- Regulatory activity indicates that some workplaces are non-compliant with the duties to maintain and implement asbestos registers and management plans. Planned compliance campaigns will help to educate duty holders about these requirements and improve the management of ACMs in workplaces.

Residential environment

- Target 9 has been achieved with the completion of the first version of the National Residential Asbestos Heatmap. AI has proven to be an effective means of centralising disparate and dispersed data.



Next steps

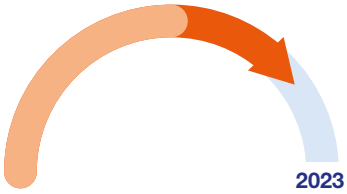
- ASEA will develop national guidance to address the need for a robust and consistent standard for conducting asbestos surveys in the built environment across Australia, including in residential and non-residential premises, which should help improve the quality of asbestos registers and management plans.
- WHS Regulators will continue to monitor compliance to report on Target 5.
- ASEA will progressively launch the National Residential Asbestos Heatmap in each jurisdiction in 2022–23, starting with state and territory government stakeholders. This will include training on how to use the heatmap. A data specifications document providing examples of the type of data ASEA needs for updating the heatmap and how to provide it will also be created.

5. Asbestos waste

Priority 3 of the Asbestos National Strategic Plan aims 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



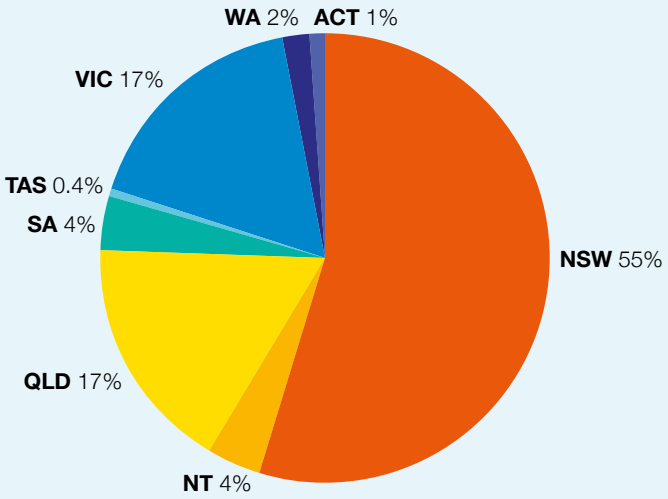
The Mid-term Progress Report noted that asbestos waste volumes have increased over the last decade and that infrastructure for asbestos waste disposal will be needed for many decades to come.

5.1 Asbestos waste data

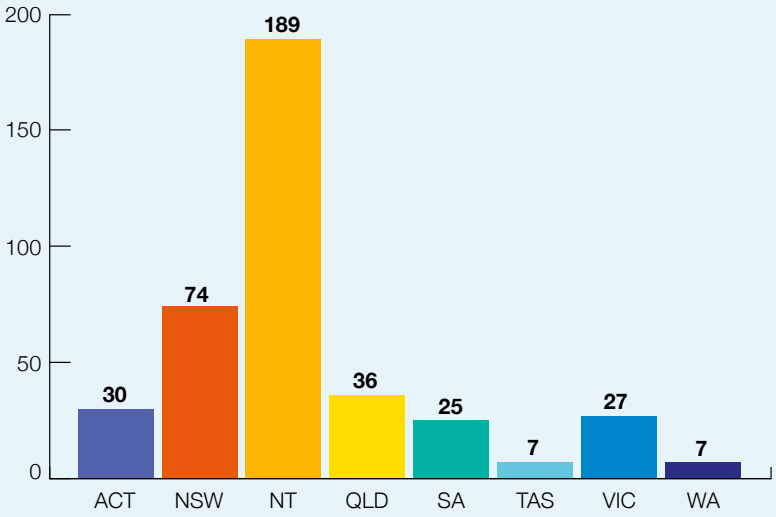
Asbestos waste data estimates for Australia are updated as part of national hazardous waste reporting compiled for the Department of Climate Change, Energy, the Environment and Water (DCCEEW). State and territory governments capture data on asbestos waste disposal from their tracking systems for hazardous waste and/or reports from licensed landfill operators. Government data from 2006–07 through to 2021–22 is summarised in Appendix A and illustrated in Figure 11a and b.

Figure 11

a) Total asbestos-containing waste by jurisdiction – 2021–22



b) Asbestos-containing waste – kg per capita by jurisdiction – 2021–22



Source: Asbestos waste data in Australia – Infographic | Asbestos Safety and Eradication Agency

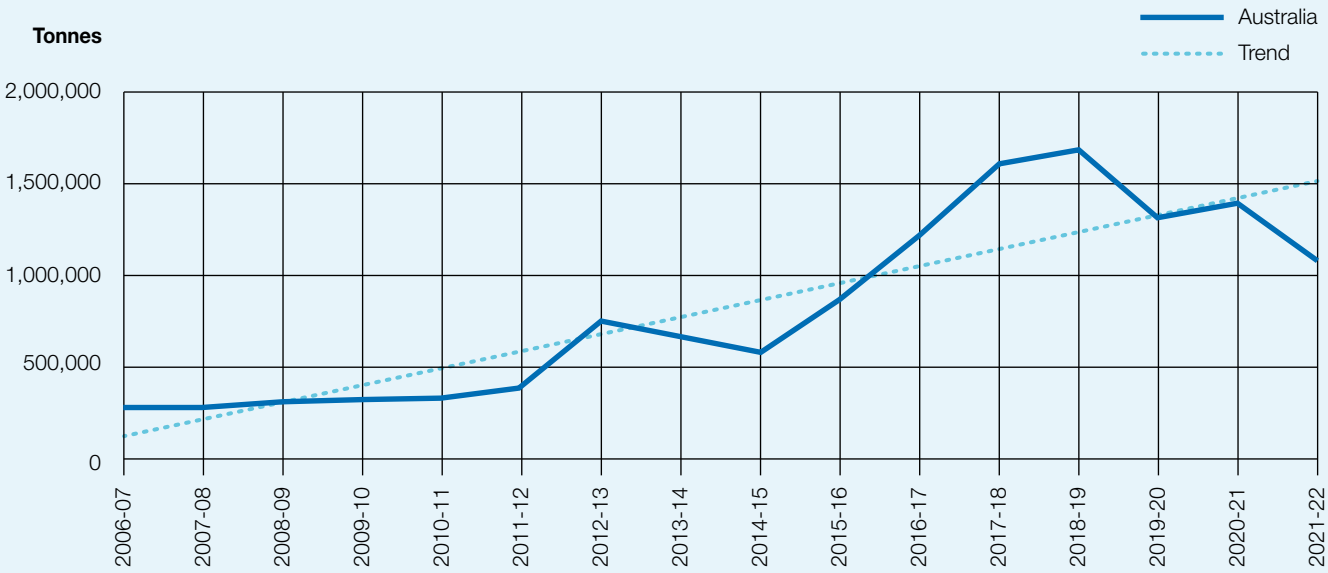
Most asbestos waste comes from renovation and urban development and goes to landfill. Building and demolition waste can also be contaminated with asbestos. Contaminated soil and rubble may be included in asbestos waste totals.[16]

There are some data limitations because states and territories record and report asbestos waste differently. For example, Western Australia, South Australia, Tasmania and the Australian Capital Territory, include only 'asbestos-containing material' (ACM) such as asbestos cement sheets, which is generally delivered to landfills as a package wrapped in plastic. New South Wales, Queensland and the Northern Territory include ACM and any soil or rubble contaminated with ACM. There is also the exclusion of some asbestos waste from disaster events and domestic or smaller loads that do not require tracking.

ASEA encourages states and territories to report packaged ACM separately from soil and rubble contaminated with ACM to enhance the consistency of data reporting and enable better comparisons to be drawn.

The total amount of asbestos waste generated in 2021–22 was 1.1 million tonnes, which is 22% less than the previous year. Despite this, the long-term trend shows increasing levels of asbestos waste (see Figure 12).

Figure 12: Total asbestos-containing waste per annum



[16] Further details can be found in the Australian hazardous waste data and reporting standard 2022 edition

5.2 Illegal disposal of asbestos

Many factors can 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 convenience, as well as lack of knowledge of the risks of exposure and the perceived likelihood of being caught. Taking action to increase awareness and enable easier and cheaper disposal of asbestos will help to overcome these barriers and reduce exposure risk for workers and the community.

ASEA conducted research in 2021–22 to estimate the amount and cost of illegally disposed ACMs. This research found that despite the significant health and clean-up costs associated with illegally disposed asbestos, there is still no coordinated or comprehensive collection of data on illegal asbestos disposal across or within the states and territories.

Cases of illegal asbestos disposal reported during the period do not reflect the full extent of the problem in Australia. For example:

- WA identified 297 reported cases of illegal disposal of asbestos during 2021–22.
- NSW EPA's RIDonline program recorded 297 reports of illegal asbestos disposal, a reduction from 411 reports in 2020–21. RIDonline is a voluntary system and it is estimated that it captures around 60% of illegal dumping incidents dealt with by councils and public land managers in NSW.

The NSW Illegally Dumped Asbestos Clean-up Program (IDACUP) has been established to help fund organisations, such as councils, to clean up illegally dumped asbestos where the party responsible for the dumping is unable or unwilling to conduct the clean up within the required timeframe. IDACUP paid one organisation approximately $5,000 to remove up to 4 tonnes of illegally dumped asbestos waste.

ASEA completed further research to explore what local governments are doing and can do to combat illegal disposal of asbestos waste. Councils were surveyed to identify examples of successful strategies. The survey showed that:

- 71% of local government bodies across Australia consider asbestos to be a significant issue
- 20% of surveyed councils currently have no active illegal asbestos disposal-related interventions
- current prevention strategies used by councils primarily focus on surveillance of common illegal disposal sites, rather than on earlier intervention to prevent illegal disposal occurring.

ASEA commenced developing a guide for local government on how to influence and change community behaviour throughout the asbestos waste journey, from awareness to removal and finally to disposal.

5.3 Making asbestos waste disposal easier and cheaper

Initiatives carried out in 2021–22 to help make asbestos waste easier and cheaper to dispose of include Sustainability Victoria's implementation of its Asbestos Disposal Management Plan. Sustainability Victoria's work has included developing a pilot program of asbestos disposal points for the temporary storage and consolidation of small quantities of packaged, non-friable asbestos prior to disposal at a licensed landfill. The pilot will trial sites for a six-month period with results obtained informing the future phased roll-out of further sites. Sustainability Victoria has been developing resources, tools and templates to support asbestos disposal point owners and operators manage asbestos safely and meet legislative and regulatory requirements. Workshops with stakeholders in regional areas identified as having limited asbestos disposal access were held to inform future work on asbestos disposal options.

The NSW NACC led the development of a multi-agency, coordinated approach to delivering on 5 priority areas set out in the 'Asbestos in NSW: Setting the Direction 2021–2022' statement. One of the priorities is improving asbestos waste disposal. Under this priority, the EPA is undertaking an assessment of asbestos waste infrastructure across NSW to identify immediate and emerging market shortfalls and determine how critical infrastructure needs will be met.

ASEA continues to maintain a national database of disposal sites licensed to accept asbestos waste, which is available on ASEA's website.

Waste levy

Where practical, waste levies are imposed by state and territory governments to encourage redirection of waste from landfill to recycling or reuse. Most jurisdictions have exempted asbestos containing waste from the levy because it is not safe to recycle or reuse.

Changes to the waste levy on asbestos reported during 2021–22 include:

- In March 2022, the Tasmanian government passed legislation that provides for a state-wide waste levy to replace voluntary regional waste levies. It allows for problem wastes (such as asbestos) to be exempt, so the levy does not deter proper disposal.
  A 4-year transition to the landfill levy arrangements commenced on 1 July 2022.[17]
- On 18 May 2022, the Western Australian Supreme Court ruled soil and sand sent to landfill is exempt from the state's waste levy if it contains asbestos that cannot reasonably be separated out.
  The determination relates to interpretation of the *Waste Avoidance and Resource Recovery Levy Regulations 2008*.[18]

As at 30 June 2022, the waste levy in Victoria was $30.96 per tonne for packaged asbestos and soil containing only asbestos contamination, which was significantly less than the Metropolitan Municipal and Industrial levy rate of $105.90 per tonne. Victoria's Asbestos Disposal Management Plan includes consideration of cost in developing options for asbestos waste disposal.

NSW remains committed to finalising the design and operation of a scheme to waive the levy for household amounts of bonded, wrapped and separated asbestos. The economic, social and environmental impacts of different approaches were considered in 2021–22, following public consultation and targeted consultation with industry. As a result, the EPA has decided to consider the proposed levy waiver for household asbestos as part of the upcoming Waste Levy Review. This ensures that there is a more comprehensive assessment of how to put in place efficient and cost-effective solutions to the safe disposal and management of household asbestos.

17 See Waste and Resource Recovery Act | Department of Natural Resources and Environment Tasmania (nre.tas.gov.au)

18 See Waroona Resources Pty Ltd -v- Chief Executive Officer, Department of Water and Environmental Regulation [2022] WASC 174

Disaster event clean-up

During 2021–22, frequent floods damaged properties with ACMs in NSW and Queensland, and asbestos was removed and disposed in post-disaster clean-ups. These jurisdictions provided information on dealing with asbestos during clean-up activities. In several flood affected areas, councils or state governments waived disposal fees (i.e. waste levy and/or gate fees) for waste created by floods. This was usually for a set period and contained some exclusions.

Publicly reported asbestos waste volumes from disaster events include:

- A tornado in the Armidale region of NSW in October 2021 generated 620 tonnes of waste, including 2.1 tonnes of asbestos.[19]
- Tweed Shire Council collected more than 63,000 tonnes of waste following the floods in early 2022, including more than 1,440 tonnes of ACMs. Flood waste was collected from kerbsides, before being processed at Stotts Creek Resource Recovery Centre and exported to a commercial landfill in South East Queensland. The Queensland Government waived its waste levy for flood waste and the NSW Government covered the transport and disposal charges of this waste.[20]

Disaster clean-up research

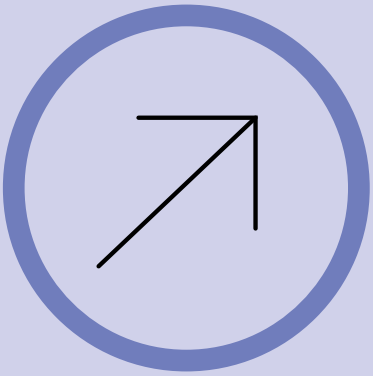
CRC CARE Pty Ltd is supporting research being undertaken by a project team from the University of Newcastle on *The effect of bushfire on the structural characteristics of asbestos*. A total of $717,957 has been granted for research to be undertaken in 2022–24.

19 See Armidale tornado clean-up nears end as recovery continues | The Armidale Express | Armidale

20 See Tweed's flood waste figures tallied | Tweed Shire Council (nsw.gov.au)

Key observations

- Developing strategies to dispose of asbestos safely and conveniently remains essential as asbestos waste volumes continue to increase.
- Disasters events that damage ACMs increase potential exposure and significantly increase the cost of removal and clean up.



Next steps

- ASEA will complete a guide for local government on how to combat illegal asbestos disposal and promote ongoing collaboration and knowledge sharing between councils.

6. Compliance and enforcement

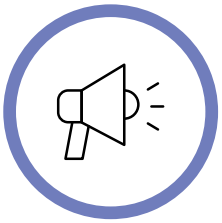
Priority 2 of the Asbestos National Strategic Plan includes an action to ensure effective compliance and enforcement of relevant laws by regulatory agencies. Targets 4 and 6 relate to this priority.

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 2021–22 to support compliance with asbestos-related laws.



Education and awareness

In addition to the activities reported in Chapter 3 on raising public awareness, other awareness raising activities reported by regulators included:

- In 2022 Build Aware, an educational campaign delivered through a partnership of WorkSafe Victoria, the Victorian Building Authority, Energy Safe Victoria, and EPA Victoria, visited the Bendigo area and Latrobe Valley to provide information sessions to apprentices at TAFE and conduct unannounced inspections.
- Workplace Health and Safety Queensland (WHSQ) trained 107 new Environmental Health Officers from local councils and 40 new WHS inspectors in ACM identification, sampling and handling. WHSQ also conducted awareness campaigns about the dangers of using high-pressure cleaners on asbestos cement roofs, changes to guidance on low-density asbestos fibreboard and clean-up of storm/flood affected structures.
- Resources Safety and Health Queensland (RSHQ) hosted a forum on health risks associated with naturally occurring asbestos and reminded site senior executives about changes to the *Mining and Quarrying Safety and Health Regulation 2017*, which commenced on 1 September 2020.
- NSW EPA's *Free fill – is it worth it?* campaign was held twice in 2021–22, in spring and autumn, after being evaluated in previous years and found to be successful.
- SafeWork NSW launched an awareness campaign about the dangers of cladding over asbestos and also developed:
  - asbestos awareness segments aired on SBS radio, spoken in Mandarin and Cantonese
  - asbestos safety podcast released to the construction sector
  - pressure cleaning asbestos roofs communication kit
  - guidance material for asbestos removal licence holders
- WorkSafe ACT produced guidance material on notification requirements, removing asbestos, managing asbestos in the workplace, and a monthly-updated list of licensed asbestos assessors and removalists. In addition, 120 emergency services staff and volunteers were trained in asbestos awareness.
- WorkSafe Tasmania hosted the BetterWork webinar in November 2021, which provided information on asbestos identification, removal and disposal and the Tasmanian Asbestos Compensation Scheme.
- SafeWork South Australia provided asbestos safety information on its website, including information on compliance campaigns and potential sanctions.
- The Australian Border Force developed a webinar for the Freight & Trade Alliance (of customs brokerages and freight forwarders in international supply chains) about the asbestos border control, awareness of risk goods and related reporting obligations for goods entering Australia. Members who successfully completed the webinar and assessment could earn continuing professional development points.

Complaints and enquiries

Some regulators also reported on asbestos-related complaints and enquiries received during 2021–22:

- SafeWork SA reported 431 asbestos-related calls to its HELP Centre – a decrease of 353 – but noted that the number of views on Asbestos.sa.gov.au had increased by 2,957 to 37,630 views.
- WorkSafe ACT received 116 asbestos-related enquiries and complaints, compared to 77 in the previous year.
- SafeWork NSW reported 1,721 requests for service, compared to 1,934 the previous year.
- The EPA Victoria received 313 asbestos-related complaints and enquiries.
- The NSW EPA's Environment Line (which also receives call from the NSW 1800 ASBESTOS hotline) received 418 calls from the public in relation to asbestos.

Site inspections and compliance audits

Across Australia, regulators reported conducting more than 3,000 proactive site visits to check compliance with asbestos-related laws. Examples include:

- Comcare established the Major Infrastructure Project (MIP) Team that, among other duties, conducts proactive and reactive inspections into notification of Class A (Friable) or Class B (non-Friable) over 10 m^2 removal works within major projects. Noting the restrictions on site access due to the COVID-19 pandemic during the reporting period, the MIP team undertook 5 proactive ACM inspections and 7 reactive ACM inspections. As part of the Telecommunications Asbestos Safety Compliance program[21], Comcare also made 54 site visits to provide information and advice, including toolbox talks, forums and presentations.
- Worksafe Victoria conducted 1,404 site visits, which included 607 proactive visits, 4 statutory visits and 793 response visits. The outcomes of this surveillance activity are reported under Target 6 (Enforcement).
- Worksafe ACT conducted 112 site visits.

Compliance campaign in South Australia

SafeWork SA completed an enforcement campaign in July 2021 targeting asbestos removalists and assessors. A report on the campaign notes SafeWork SA conducted 48 audits, resulting in 28% of licensed asbestos removalists being audited and 33% of audits being associated with a building that required an asbestos register. Twenty-one Statutory Notices were issued for breaches of the WHS legislation, consisting of 7 Prohibition Notices and 14 Improvement Notices.

The largest areas of non-compliance related to licensed asbestos removal workers:

- respiratory protection equipment (RPE) not having an effective facial seal to minimise exposure to airborne asbestos fibres (7)
- not being provided health monitoring (5)
- carrying out licensed asbestos removal work without undertaking the specified National Vocational Education and Training (VET) course for the type of removal being undertaken (3).

During the campaign SafeWork SA also:

- suspended a licencsed asbestos assessor for failing to undertake a proper and effective inspection of the asbestos removal area to verify that the area was safe for use after the asbestos removal was complete
- suspended immediately a class B licensed asbestos removalist for failing to remove asbestos safely and competently, and subsequently cancelled the licence and disqualified the licensee from reapplying for 12 months.

For further information on asbestos compliance in SA see Health and Safety Snapshot – asbestos.

[21] The Telecommunications Asbestos Safety Compliance Program was established in 2016 to ensure the National Broadband Network rollout has adequate regulatory oversight of asbestos risks, and other WHS risks.

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 and are seeking sanctions through courts for more serious non-compliance.

All jurisdictions continue to meet this target. Figure 13 (following page) shows the enforcement actions undertaken in 2021–22 for breaches of asbestos-related laws. Totals include notices issues for non-compliance with requirements for asbestos registers and managements plans reported in Chapter 4. Examples of successful prosecutions under WHS and environmental protection laws that occurred during the reporting period are provided at Appendix B.

Environmental protection – enforcement actions

In 2021–22 the NSW EPA successfully prosecuted one Tier 1 and six Tier 2 offences that involved asbestos under the *Protection of the Environment Operations Act 1997*. This equates to 23% of all charges successfully prosecuted by the EPA in this period. Fines amounted to $1,029,750.

The Queensland Department of Environment and Science reported investigating 150 cases related to asbestos.

The EPA Victoria noted that 30 investigations are underway for illegal disposal of construction and demolition waste, which is likely to contain asbestos waste, with 5 resulting in charges being laid.

The South Australian EPA reported investigating 2 cases relating to illegal disposal of asbestos and one case of an illegal depot of asbestos contaminated waste.

Work health and safety – enforcement actions

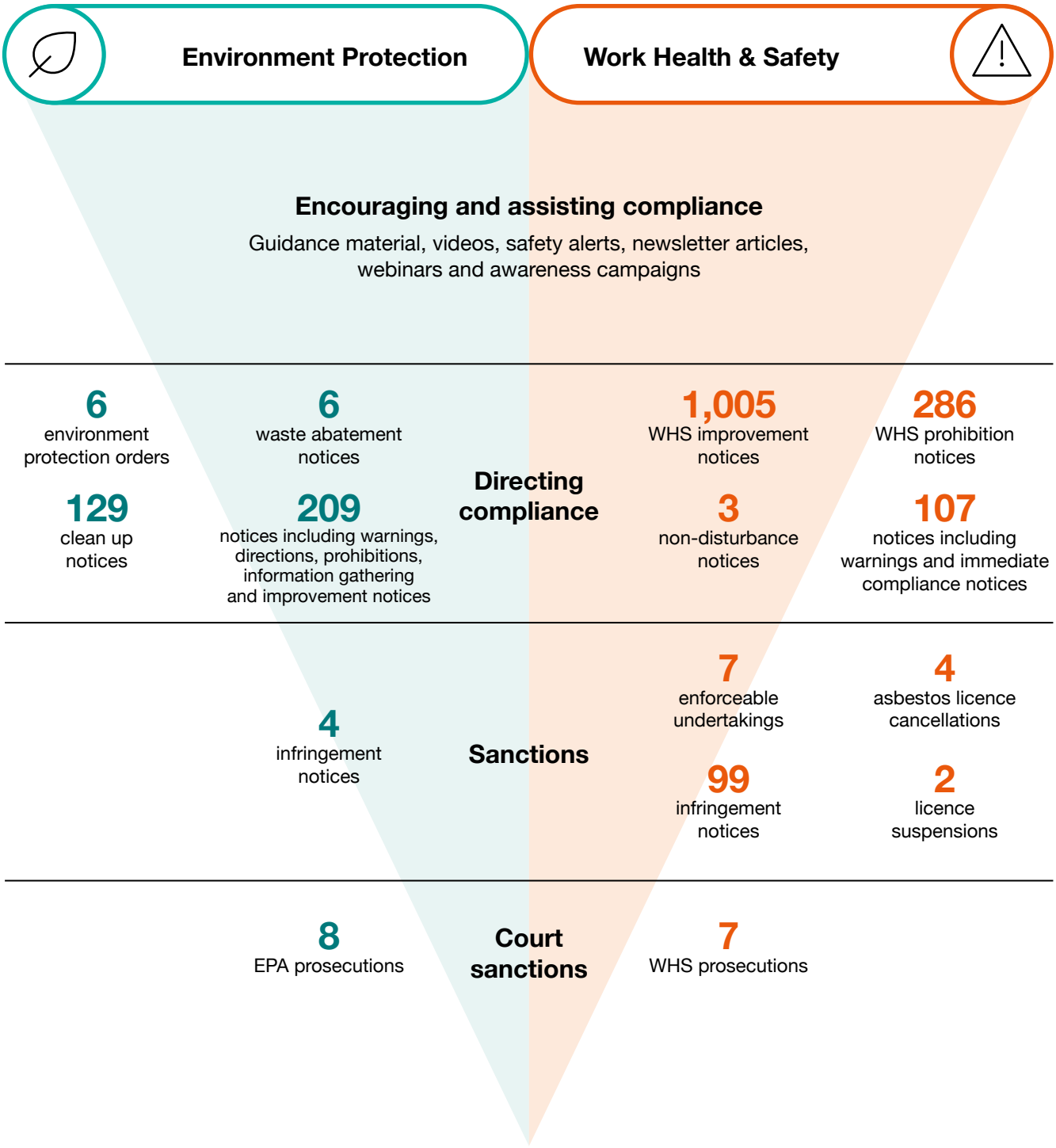
During 2021–22 WHSQ commenced 8 investigations into workplace incidents involving asbestos and finalised 3 successful prosecutions with fines totalling $27,000 (plus costs). An additional 3 matters are progressing through the courts.

SafeWork SA investigated 4 cases in relation to:

- unsafe removal of friable asbestos
- failure to identify and remove asbestos prior to commencing demolition
- failure to undertake an effective clearance inspection
- failure to provide asbestos removal control plan to person who commissioned the work.

WorkSafe ACT commenced an investigation for alleged illegal demolition and asbestos removal, while WorkSafe Victoria completed 9 investigations.

Figure 13: Regulatory pyramid showing reported enforcement activities by environment protection and WHS regulators for 2021–22



Note: These numbers are approximate due to gaps in reported data. The EPA prosecution numbers include cases where asbestos may be one component of a general pollution 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.

ASEA manages import and export permissions under the Customs regulations. Permits can be issued for one-off transactions or on an ongoing basis for up to 5 years and can cover import and/or export.

Table 6 shows the permits issued by ASEA during the current Asbestos National Strategic Plan. Changes to the number of permits issued in 2021–22 reflects transition to a new process with a common renewal date, and issuing permits that are valid for 2 or more years.

Table 6: Permits issued for import and export of asbestos

	2019–20	2020–21	2021–22
Import	28 (18 issued to laboratories)	29 (22 issued to laboratories)	11 (5 issued to laboratories)
Export	5 (All held both import and export permits)	5 (4 held both import and export permits)	6 (2 held both import and export permits)

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.

In 2021–22, the ABF carried out 355 tests and reported 73 detections (69 chrysotile, 3 tremolite, and 1 anthophyllite). Products imported with asbestos included vehicles, vehicle parts and agricultural equipment. Building products, gaskets, bulk raw material and mineral slabs also featured.

During this period the ABF issued 13 warning notices, and 5 infringement notices with fines totalling $36,630.

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 can be initiated to enable timely collaborative action across relevant agencies. There were 3 new RRPs initiated in 2021-22, 2 of which led to published safety alerts for:

- San Da branded gaskets
- Paddlewheel aerators

The ACCC published one new recall notice for consumer goods containing asbestos in 2021–22 for Manually operated bee smokers (6 April 2022).[22]

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 recalls of goods containing asbestos.

[22] Also see Alert: Asbestos in Manual and Battery-Operated Bee Smokers – February 2022

6.3 Asbestos law and policy changes

Victoria

New environmental protection laws came into effect on 1 July 2021.[23] The new laws apply a general environmental duty, which is a positive duty on all Victorians to proactively identify and minimise environmental risk as far as is reasonably practicable. Failure to comply with the general environmental duty attracts civil liability and criminal penalties of up to $726,920 and/or 5 years imprisonment for a natural person, and up to $3,634,800 for a body corporate if the breach is intentional or reckless.

Those who manage or control contaminated land also have a duty to manage risks from the contamination, regardless of who caused the contamination or if it happened prior to assuming management or control of the land.

New reporting obligations apply to certain pollution incidents and contaminated land above certain levels.

New South Wales

The *Environment Legislation Amendment Act 2022* commenced on 4 March 2022.[24] This varies environmental Acts to ensure those responsible for contamination and pollution can be made to clean it up or manage it into the future.

Changes to the Contaminated Land Management Act 1997 include provisions that:

- allow the EPA to issue a clean-up or prevention notice as soon as it is notified of contamination, so that it can take immediate action to prevent further contamination and clean-up of the site
- increase maximum penalties to align with similar offences and court orders to those available under the *Protection of the Environment Operations Act 1997*.

Changes to the *Protection of the Environment Operations Act 1997* include provisions that:

- expand regulatory powers and tools to ensure those responsible for contamination and pollution can be made to clean it up or manage it into the future, including the ability to act against multiple people that contributed to pollution
- new and increased maximum penalties to align with similar offences and highlight the severity of those crimes, particularly relating to false or misleading conduct and providing false or misleading information
- enable conditions of suspended, revoked, or surrendered licences to be transferred or enforced through a restriction or public positive covenant on land covered by the licence.

[23] For more information see The General Environmental Duty under Victoria's new environmental regulatory regime | Victorian Government Solicitor's Office (vgso.vic.gov.au)

[24] For more information see What's new in WHS laws on the NSW EPA website.

Western Australia

New Work Health and Safety laws commenced on 31 March 2022. The new laws are based on the model Work Health and Safety laws. Requirements for asbestos management are largely the same; however, detail previously in codes of practice is now in regulations. The main changes include requirements to:

- update asbestos registers every 5 years
- notify WorkSafe WA prior to removal of non-friable asbestos
- obtain a clearance certificate from an independent competent person when non-friable removal is complete.[25]

The licences have been renamed to Class A Asbestos Removal Licence (previously unrestricted) and Class B Asbestos Removal Licence (previously restricted), and VET courses have been prescribed for each licence class. A new authorisation has also been introduced for an Asbestos Assessor to undertake air monitoring, clearance inspection and issue of clearance certificates required on all Class A asbestos removal work. Two asbestos codes of practice came into effect on 15 July 2022.

Tasmania

The *Waste and Resource Recovery Act 2022* and associated regulations were passed by the Tasmanian parliament. The new laws introduce a state-wide landfill levy from 1 July 2022. Problem waste, such as asbestos, is exempt so that the levy does not deter proper disposal.

On 29 March 2022 amendments relating to clean fill came into effect under the *Environmental Management and Pollution Control Act 1994* and the *Environmental Management and Pollution Control (Waste Management) Regulations 2020*. These amendments include:

- Clean fill will no longer be exempt from waste regulation and must now be disposed of in accordance with the legislation.
- The definition of clean fill has been expanded to 2 types: clean fill type 1 (natural materials) and type 2 (construction materials); to better regulate the use of the different types of clean fill.
- The Director can issue a declaration specifying the maximum levels of pollutants, dimensions, and proportions of clean fill material, to better control what is disposed of as 'clean fill'.

Australian Capital Territory

In March 2022, the ACT government launched a new Loose-fill Asbestos Disease Support scheme to provide financial support to people with an asbestos-related disease from living in a loose-fill asbestos insulation property, where they had no substantial occupational exposure that would allow a workers compensation claim to be made.

The scheme applies to applicants diagnosed from 1 January 2014; the year the ACT's Asbestos Response Taskforce commenced. The ACT and Australian Government have jointly provided a total of $16 million to fund the scheme, which will be implemented and administered by the ACT Government.

The ACT Government also reported significant progress in achieving its goal of eradicating loose fill asbestos insulation from residential homes across Canberra, with 1006 affected residential properties now demolished. By 30 June 2022 only 23 known affected residential properties remain in the community.

The ACT's Asbestos Response Taskforce formally concluded on 30 June 2022 after 8 years of operation. A smaller coordination team will manage any newly identified properties under an ongoing buyback scheme.

[25] Previously requirements for prior notification and clearance certificates applied only to removal of friable asbestos.

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.
- As identified in the Mid-term Progress Report some regulators were able to provide more comprehensive information on their activities than others. SafeWork SA's annual Asbestos Activity Snapshot and SafeWork NSW's Asbestos and Demolition Quarterly Dashboard are good models for capturing compliance and enforcement data.

Next steps

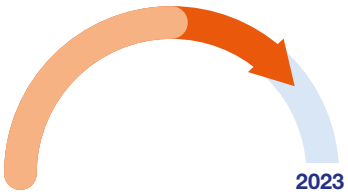
- More consistency in compliance and enforcement data will improve measuring trends to determine whether effective asbestos compliance programs (Target 4) and initiatives that make it easy to comply with asbestos-related laws (for example, Target 7) lead to greater compliance and fewer sanctions.

7. International collaboration and leadership

The Australian Government is responsible for implementation of Priority 4 of the Asbestos National Strategic Plan, having committed to international collaboration and leadership to help secure a worldwide ban on the production and trade of ACMs.

Target 8

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



Target 8 measures progress using data from local and international sources on efforts to ban asbestos production, in South-East Asia and the Pacific Region.

ASEA works with the following government and non-government organisations on Priority 4 and Target 8 of the Asbestos National Strategic Plan:

- The Department of Foreign Affairs and Trade (DFAT) has set an Environmental and Social Safeguard Policy on Managing Asbestos Risk, which applies to all Australian Official Development Assistance funded activities.
- The 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.
- Secretariat of the Pacific Regional Environment Programme (SPREP), which is the regional organisation established by Pacific Region governments to protect and manage the environment and natural resources, including through endorsement of a ban or restrictions on import, re-use and re-sale of products and waste containing asbestos. Australia contributes $4.3 million per year in core funding to SPREP.
- The Pacific Hazardous Waste Management (PacWaste) Plus project is funded by the European Union and implemented by SPREP. The project aims to assist participating countries to improve waste management practices of which asbestos is a priority.

7.1 Current international markets, mining and production

The vast majority of countries have either banned the use of asbestos via legislation or restricted usage so that in 2022, only about 12% of countries use more than 500 tonnes per year.

The top 4 countries that continue to mine chrysotile asbestos are Russia, Kazakhstan, China and Brazil with Zimbabwe intending to increase mining activities in coming years:

- Russia extracted 699,000 tonnes in 2021, down from 720,000 in 2020 (down further from 790,000 tonnes in 2019)
- Kazakhstan extracted 250,000 tonnes in 2021, up from reported 227,000 tonnes in 2020
- China extracted 130,000 tonnes in 2021, steady from 2020 but down from 135,000 tonnes in 2019
- Brazil extracted 153,600 tonnes in 2021 (solely for export purposes), up considerably from 71,200 in 2020
- Zimbabwe extracted 10,000 tonnes in 2021, slightly up from 8,000 in 2020 as their mines continue to be recommissioned.

The worldwide consumption of asbestos approximately halved in the past decade from 2 million tonnes per annum in 2010 down to 1.3 million tonnes in 2022. The main countries importing and consuming asbestos in 2021 continued to be:

- India – 408,000 tonnes
- China – 261,000 tonnes
- Russia – 94,000 tonnes
- Uzbekistan – 95,200 tonnes
- Indonesia – 130,200 tonnes.

In Asia, the main countries importing and consuming chrysotile asbestos in 2020 were:

- Sri Lanka – 71,200 tonnes,
- Vietnam – 35,300 tonnes,
- Thailand – 32,600 tonnes
- Bangladesh – 29,300 tonnes.

In 2020, the global asbestos trade was worth US$298 million with Russia earning US$178 million in export profits and India paying US$121 million for imports of chrysotile asbestos.

Following the May 2021 decision by the Asian Infrastructure Investment Bank to add ACM to the prohibited list of materials for bank-financed projects the Asian Development Bank's updated Safeguard Policy Statement released in March 2022 included a ban on ACM.

7.2 Asbestos bans in South-East Asia and the Pacific

The Mid-Term Progress Report outlined how Union Aid Abroad-APHEDA, with the support of ASEA, continues its *Asbestos – Not here, not anywhere* campaign by engaging with governments, employers, trade unions, communities, specialists, victims and consumers to raise awareness about asbestos exposure risks, alternative safer materials, safe removal and disposal, and benefits of banning imports and use.

While national level asbestos prohibitions have yet to be implemented in the target countries, regulatory and policy progress has been achieved, despite the strong influence of the asbestos industry lobby and the pandemic slowing the momentum of the *Asbestos – Not here, not anywhere* campaign. The activities undertaken in 2021–22 included:

- developing and delivering awareness raising training and materials for ethnic minority communities in Vietnam and other vulnerable communities in the 4 target countries in South-East Asia (Cambodia, Indonesia, Lao People's Democratic Republic and Vietnam)
- providing advice, information and support to facilitate the development and updating of National Action Plans on Eliminating Asbestos-Related Diseases (NPEAD) and National Asbestos Profiles (NAP) in the 4 target countries
- development and delivery of communication materials with a specific South-East Asian focus highlighting the dangers of exposure to asbestos, products that contain asbestos and safer alternatives
- providing Australian support for international awareness raising activities such as delegates from the 4 countries attending the Asbestos Safety and Management Conference in May 2022, engagement with unions and civil society groups in the Pacific Region and cooperation with the Asian Development Bank to update their policies regarding asbestos use.

Australia continues to provide development assistance to improve environmental outcomes in the Pacific, including through our engagement with and financial support to SPREP. Australia currently provides $4.3 million per year in core funding to SPREP.

At its 13th meeting of Officials in September 2021, SPREP endorsed the Asbestos Management Legislative Reform Pathway, developed by the SPREP PacWaste Plus project, which identified steps required to institute national asbestos bans. The Pathway includes an analysis of legislative options for the management of asbestos, and policy notes to guide the drafting of national legislation to impose a ban on the importation of asbestos.

A representative from the PacWaste Plus project attended and presented at the Asbestos Safety and Management conference in May 2022, providing an update on ACM management in Pacific-Island countries and moves to introduce national bans on asbestos.

Other international work includes guidance material that ASEA developed for Columbia to support its ban on asbestos, which came into effect in 2021. In 2021–22, the assistance provided to Colombia was extended to interested organisations in Mexico looking to introduce a national ban in that country.

The Rotterdam Convention

Australia's obligations under the Rotterdam Convention are administered by DCCEEW. Our obligations cover the international prior informed consent trade of certain hazardous chemicals.

There have been 6 failed attempts over the past 14 years to list chrysotile asbestos on Annex III of the Rotterdam Convention. Listing has been blocked mainly by countries which continue to mine and export raw chrysotile asbestos and market it as a 'safe' product to developing countries. The Conference of the Parties (CoP) to the Convention held in June 2022 failed again to list chrysotile on Annex III. During 2021–22, DCCEEW continued to advise government on a proposal to reform the convention to facilitate the listing of chrysotile on an Annex to the Convention at CoP11 in 2023.

Key observations

- Although 128 countries have not yet banned the use of asbestos, 2022 asbestos trade data indicates a dramatic drop in production globally, with only 1.3 million tonnes produced. Whether this is due to changing consumer demand or increasing calls by international agencies to ban the use of asbestos, the trend is obvious.
- The single biggest challenge to progressing asbestos bans continues to be the significant efforts by the asbestos industry and major asbestos exporting countries to block any regulation of their product in the region.
- Building capacity for local officials and civil society groups to take action in preventing exposure to asbestos is key to the successful implementation of national bans. A good example is the work that the PacWaste Plus team of SPREP has achieved in developing model asbestos management policies, codes of practice and guides for implementing an ACM ban in each of the 14 Pacific Island countries and Timor-Leste.

Next steps

- The Rotterdam reform proposal co-sponsored by Australia will be considered at the Conference of Parties in May 2023.
- Continue to counter misinformation by the asbestos industry and exporting countries.
- Continue to advocate that the use of chrysotile asbestos is not sustainable due to the need for significant investment towards legacy asbestos management, future costs of removal and disposal and ongoing impacts on community health rates of ARD.
- Using the WHO Global Burden of Disease Study data and other research to quantify asbestos-related diseases in the 4 target countries in South-East Asia and the economic burden of these diseases to inform national asbestos profiles and action plans across the region.
- ASEA will continue to strengthen direct engagement with government officials in South-East Asia to provide advice on strengthening WHS laws/regulations around asbestos exposure and promote its website and online resources as trusted sources of information on asbestos.
- ASEA will work with the Australian Missions in the 4 target Asian-Pacific countries to highlight their role and responsibilities in implementing the Asbestos National Strategic Plan and how they can support ASEA and APHEDA activities.
- ASEA will collaborate with the Asbestos Disease Research Institute on their WHO Collaboration Centre deliverables and improving clinical testing and training in the 4 countries.

Appendix A – Asbestos waste data

Summary of all reported asbestos waste from 2006–07 to 2021–22 (tonnes per annum). This includes wrapped ACM, soil and rubble contaminated with ACM; except blue cells, which are wrapped ACM only.

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
2006–07	372	207,860	1,593	49,847	11,757	1,588	42,099	225	315,340
2007–08	24	211,184	1,639	44,772	17,602	1,009	35,768	5,947	317,944
2008–09	18,661	222,299	1,684	48,577	7,798	2,023	32,882	10,836	344,760
2009–10	170	227,936	1,712	67,598	5,916	332	50,543	12,286	366,492
2010–11	1,126	194,700	1,724	87,834	21,085	171	42,515	19,390	368,544
2011–12	4,757	207,300	1,758	101,048	22,828	14,917	61,050	12,100	425,757
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	180,737	20,679	1,102,534

Appendix B – Prosecution summaries

This appendix contains summaries of a sample of enforcement proceedings that were concluded during the 2021–22 financial year; however, some prosecutions may have commenced in previous financial years. Summaries have been compiled from publicly available information and may not be complete. Defendants' names have been included in the summaries only if that information has previously been published.

Work Health and Safety

Victoria

In August 2021, Bayside Demolition Pty Ltd (Bayside) pleaded guilty to 2 charges under the *Occupational Health and Safety Act 2004* for failing, as far as reasonably practicable, to provide its employees a working environment that is safe and without risks to health. Bayside was a demolition contractor and licensed Class B (i.e. non-friable) asbestos removalist engaged to demolish a house.

WorkSafe Victoria inspectors attended the site and were informed that Bayside employees had found ACMs inside the house and roof eaves, which had been removed and left unbagged in the garden. Inspectors found several issues on site, including: no site barricading or signage warning of asbestos works; no wet down of ACMs; no nominated asbestos removal supervisor; employees not wearing personal protective equipment (PPE); no evidence of asbestos removal training for employees; and no decontamination processes for PPE and equipment used in asbestos removal.

Following Bayside's appeal from the Magistrates Court, the Melbourne County Court sentenced the company without conviction, and ordered it to pay a $25,000 fine plus court costs.

In April 2022, Power Building & Maintenance Services Pty Ltd (Power Building) pleaded guilty to offences under the *Occupational Health and Safety Act 2004* and *Occupational Health and Safety Regulations 2017* for failing to undertake an asbestos identification process before commencing demolition works. Demolition had already begun when WorkSafe Victoria inspectors attended the site and issued a prohibition notice requiring an asbestos audit be conducted before further work was undertaken. The audit revealed ACMs had been disturbed during the demolition works conducted before WorkSafe Victoria attended the site.

Power Building was sentenced in Frankston Magistrates Court to a 12-month adjourned undertaking, was ordered to pay $3,000 to the Court Fund and pay costs of $4,000. The court did not record a conviction as Power Building entered an early guilty plea, had no prior criminal history and no subsequent matters.

Western Australia

In February 2022, Alcoa of Australia (Alcoa) and Monadelphous Engineering Associates (Monadelphous) pleaded guilty to offences of failing to provide a safe work environment. Two Monadelphous employees at Alcoa's Pinjarra alumina refinery were exposed to asbestos when one used an angle grinder to remove an asbestos-containing coating from a steel column while carrying out their roles, resulting in risk of asbestos fibres becoming airborne. A Monadelphous supervisor signed off the work with asbestos-related information missing in the Authority to Proceed form, resulting in the 2 employees being unaware of the presence of asbestos.

The Mandurah Magistrates Court fined Monadelphous $25,000 and ordered it pay costs of $6,000, and fined Alcoa $30,000 and ordered it pay costs of $5,000.

Queensland

In August 2021, a not-for-profit entity pleaded guilty to offences under the *Work Health and Safety Act 2011* and the *Work Health and Safety Regulations 2011* for knowingly carrying out unlicensed asbestos removal work and allowing workers to use equipment in an uncontrolled manner. The entity owned and operated a property in Gladstone and had received funding under the Queensland Government's 'Skilling Queenslanders for Work' program for disadvantaged workers.

Trainee workers were directed to remove over 100 m2 of asbestos-containing vinyl tiles which were recorded as such in the site's Asbestos Register and Management Plan. Trainees were also told to use a dustpan, brush and broom to sweep up dust, debris and tile pieces, that is, did not use appropriate dust containment or suppression measures. A subcontractor, who was not a licensed asbestos removalist, then sanded the floorboards with an electric sanding machine.

The entity was sentenced in the Gladstone Magistrates Court and fined $4,000 plus court costs.

The court did not record a conviction as the entity contributed to the local community, entered an early guilty plea, had no prior convictions, proactively investigated how the incidents occurred, and had taken steps to remedy the error.

In October 2021, Pattersons Insurerbuild Pty Ltd (Pattersons) pleaded guilty to offences under the *Work Health and Safety Act 2011* for failing to ensure, as far as is reasonably practicable, the safety of workers under its direction. Gympie Regional Council engaged Pattersons as principal contractor to repair council properties damaged in hailstorms, including Gympie Library.

Pattersons was provided with the library's asbestos register but did not provide the register to the subcontractor it engaged to carry out the works or advise the subcontractor about the presence of asbestos in the library's vinyl floor tiles. The subcontractor's workers removed the damaged floor tiles without appropriate PPE, resulting in health and safety risks workers and the public.

Pattersons was sentenced in the Gympie Magistrates Court and fined $20,000 plus court costs. The court did not record a conviction as Pattersons entered an early guilty plea, had no prior convictions and had taken remedial steps at great expense to prevent similar breaches in future.

In January 2022, a handyman pleaded guilty to multiple offences under the *Work Health and Safety Act 2011* and the *Work Health and Safety Regulations 2011*, for removing asbestos without a licence, failing to ensure the safe confinement and removal of asbestos waste and using implements on asbestos causing airborne contaminants to be released into the atmosphere.

A homeowner engaged the handyman through Airtasker to remove asbestos. The handyman represented to the homeowner that he was a qualified to conduct asbestos removal work and produced a foreign certificate as evidence of his qualification. Over 3 days, the handyman and an assistant used a wrecking bar to remove approximately 37m^2 of ACMs, causing airborne release of asbestos fibres. He then loaded the asbestos waste directly into a ute tray without sealing or containing the waste.

The handyman was sentenced in the Brisbane Magistrates Court and fined $3,000 plus court costs. The court did not record a conviction as the handyman had entered an early guilty plea, had no prior criminal history and was otherwise of good character.

Environmental protection

New South Wales

In August 2021, Mr Fouad Arja pleaded guilty to offences under the *Protection of the Environment Operations Act 1997* for land pollution, failing to comply with a prevention notice and unlicensed waste disposal.

The NSW EPA acted in response to tip-offs from Liverpool City Council and the community and used covert surveillance including drones in its investigation of Mr Arja's activities at a rental property in Rossmore. Some of the waste materials Mr Arja was stockpiling were found to contain asbestos. After the EPA issued a prevention notice to Mr Arja, surveillance captured more trucks entering the property depositing waste, and an excavator disturbing and spreading waste. A search warrant was then executed leading to the discovery of buried building and demolition waste.

Mr Arja was fined a total of $180,000 and was ordered to pay NSW EPA's legal and investigation costs of $90,000.

In November 2021, Mr Rabih El Zaher pleaded guilty to offences under the *Protection of the Environment Operations Act 1997* for failing to provide records requested by NSW EPA for its investigation into alleged disposal of waste, including potential asbestos waste at a property in Fullerton. Mr El Zaher was issued with a notice to provide details of waste transport and vehicle movements, which he failed to produce. NSW EPA made multiple attempts to obtain the information from Mr El Zaher. Paramatta Local Court fined Mr El Zaher $6,000 and ordered him to comply with the notice to produce records within 14 days.

In March 2022, Mr Munaf Al-Sarray, an employee of Ace Demolition and Excavation Pty Ltd, pleaded guilty to 2 offences under the *Protection of the Environment Operations Act 1997* for supplying false or misleading weighbridge disposal dockets for waste including asbestos at landfill sites in Kemps Creek and Eastern Creek.

Mr Al-Sarray was fined a total of $270,000 and was ordered to pay NSW EPA's costs and publicise the details of the offence in *Inside Waste* magazine.

In May 2022, Mr Fayed Afram, former director of SSADCO Contractors Pty Ltd was found guilty of offences under the *Protection of the Environment Operations Act 1997* for supplying false or misleading weighbridge disposal dockets and land pollution. Mr Afram's business charged $4 million, including $2.4 million in waste levies, to remove 17,600 tonnes of soil containing asbestos and other restricted waste from the Green Square development site in 2016–17.

NSW EPA discovered the offences when an end-of-project waste disposal audit revealed inconsistencies in weighbridge dockets and invoices. The waste was supposed to be taken to appropriately licensed landfill sites but instead all the waste was dumped illegally elsewhere. Mr Afram's company used some of the waste, without the landowner's knowledge, in a contract to build a private road, while waste was also taken to a property in Horsley Park.

Mr Afram was fined a total of $240,000 and was ordered to pay NSW EPA's legal and investigation costs of $220,000. He was also ordered to publish details of the offence in the *Daily Telegraph* and *Inside Waste* magazine. In a linked case, Mr Afram was prosecuted by police and convicted in the District Court for fraud relating to the same false and misleading conduct offence. He was sentenced to 2-years' imprisonment served via intensive correction order.

In June 2022, Mr Christopher Binos was convicted of offences under the *Protection of the Environment Operations Act 1997* for failing to comply with clean-up notices, unlawfully disposing of asbestos waste. Mr Binos supplied approximately 1,000 tonnes of free fill for a driveway comprising asbestos-contaminated soil and building rubble to an elderly property owner living near Shellharbour, and in a separate incident, provided 2,400 tonnes of similar free fill to a property owner in Vineyard for a horse arena. NSW EPA issued clean-up notices to Mr Binos, which he failed to comply with, and the Vineyard property owner incurred over $60,000 in remediation work to remove the asbestos-contaminated soil.

The court found Mr Binos acted deliberately regarding each property owner, and in relation to the Vineyard offence, found he acted with a significant degree of planning. Mr Binos was fined a total of $220,000 for the offences, was ordered to have the waste removed at each property, compensate the Vineyard landowner for their remediation costs of more than $60,000 and pay NSW EPA's legal costs totalling $60,000.

South Australia

In March 2022, Aurora Property Investments Pty Ltd (Aurora) and one of its directors, Mr Alex Panas, pleaded guilty to offences under the *Environmental Protection Act 1993* for causing material environmental harm and failing to notify EPA SA.

Aurora owned a building that had an asbestos cement roof. Mr Panas arranged for a section of the roof to be pressure cleaned so it could be painted. Mr Panas knew the roof contained asbestos but failed to notify the tenant, a gym operator, before cleaning took place. Gym patrons noticed debris during cleaning and complained. Samples taken from air-conditioning units, the roof gutter and carpark surface found asbestos.

The Environment, Resources and Development Court found Aurora and Mr Panas' actions meant members of the public having no knowledge of, or ability to protect themselves from asbestos exposure, and that failing to notify the EPA SA as soon as gym patrons raised their concerns was the more serious offence.

Aurora was fined $24,000 and Mr Panas was fined $12,000, plus court costs. Aurora and MrPanas were also ordered to pay $60,000 to cover EPA SA's expenses to decontaminate, clean-up and monitor the site.

In April 2022, Mr Ronald Shaw was found guilty of offences under the *Environmental Protection Act 1993* for illegally disposing asbestos waste next to wetlands in northern Adelaide, which was only a short distance from a waste depot that accepted hazardous materials. Mr Shaw was caught dumping the waste on CCTV set up as a trial by the local council.

The Environment, Resources and Development Court fined Mr Shaw approximately $6,500 and he was also ordered to pay investigative costs associated with his case.

Northern Territory

In October 2021, Mr Michael Anthony and his company, DWD Project Pty Ltd, were convicted under the *Waste Management and Pollution Control Act 1989* for failing to comply with pollution abatement notices. NT EPA officers observed building materials, containing hazardous materials including asbestos, being bulldozed over the edge of Mr Anthony's property and into Darwin Harbour to increase the size of his waterfront property.

Darwin Local Court fined Mr Anthony and his company a total of $300,000 but Mr Anthony appealed the decision in the NT Supreme Court on 8 grounds including that the original fine imposed was unreasonable in the circumstances. In May 2022, the Supreme Court dismissed the appeal and other pending charges against Mr Anthony and his company under the *Planning Act 1999* were returned to the Darwin Local Court.

Appendix C – Asbestos activities in South-East Asia

SE Asian country	Deaths due to occupational asbestos exposure*	Asbestos ban** Complete/ partial/none	National Action Plan** Yes/no	National Asbestos Profile** Yes/no	Asbestos consumption*** Amount imported and/or manufactured/used	Other asbestos-related activities e.g. training, policies
Brunei	9	Complete	No	No	0	
Cambodia	170	None	Yes	Yes – updated 2022	4,292 tonnes (216 tonnes raw fibre, 4,076 ACM)****	New WHS laws being developed, likely to include asbestos regulations
Indonesia	1,662	None	No	Yes – compiled by NGOs, not recognised by Government	130,000 tonnes	
Lao People's Democratic Republic	29	None	Yes	Yes – published 2017, possible update in 2023	1,800 tonnes	
Malaysia	166	None	No	No	2,740 tonnes	
Myanmar	458	None	No	No	unknown	
Philippines	345	None	No	Yes	3,550 tonnes	
Singapore	229	Partial ban	No	No	0 (unknown)	Ban on chrysotile asbestos in construction from 1989
Thailand	992	None	No	No	32,600 tonnes	
Timor-Leste	5	None	No	No	0 (unknown)	
Vietnam	1,199	No – committed to 2023 but may be extended to 2030.	Yes	Yes	35,200 tonnes	

Sources:

* 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. Available from http://ghdx.healthdata.org/gbd-results-tool

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