



**ACT**  
Government

**Asbestos Response  
Taskforce**

# Long Term Management of Loose Fill Asbestos Insulation in Canberra Homes



August 2014

# Contents

<b>Executive Summary</b>	<b>1</b>
Mr Fluffy	1
Historical overview	1
Where to now?	2
Recommendations	3
<b>What we know about asbestos</b>	<b>4</b>
Asbestos related disease	4
Is there a safe level of asbestos exposure?	5
Exposure in affected houses	6
<b>Managing Mr Fluffy</b>	<b>7</b>
1968–1989	7
1989–1993: the original removal program	8
1993–2012	8
2013–14: From Downer to the Taskforce	9
<b>Living with Mr Fluffy – the current state of affected Canberra homes</b>	<b>11</b>
<b>Asbestos assessment reports – an overview</b>	<b>16</b>
The list	17
What do the assessments tell us?	17
Assessors’ collected observations	18
<b>Removing Mr Fluffy</b>	<b>20</b>
Managing risk	20
A second removal program	21
Demolition	21
Even more cleaning	22
Seal it and leave it there	23
Conclusion	24
<b>Appendix I – Advertisement from 1968</b>	<b>26</b>
<b>Appendix II – Historical Advice</b>	<b>27</b>
<b>Appendix III – Consultation</b>	<b>30</b>
ACT Officials	30
<b>Appendix IV – Memorandum of Understanding</b>	<b>31</b>
<b>Appendix V – 1993 Letter</b>	<b>39</b>
<b>Appendix VI – 2005 Taskforce Letter</b>	<b>40</b>
<b>Appendix VII – Work Safety Commissioner’s February 2014 Letter</b>	<b>42</b>
<b>Appendix VIII – Asbestos Response Taskforce July 2014 Letter</b>	<b>44</b>
<b>Appendix IX – Sample Asbestos Reports</b>	<b>46</b>
<b>Bibliography</b>	<b>49</b>

# Table of Figures

Figure 1 – asbestos in an external wall (of an unremediated home) .....	11
Figure 2 – asbestos in an interior wall (note new cable penetrating stud at top left).....	12
Figure 3 – an unremediated roof space.....	12
Figure 4 – roof space during remediation.....	13
Figure 5 – roof space during remediation (note gap to wall cavity).....	13
Figure 6 – asbestos remaining behind a cornice .....	14
Figure 7 – asbestos in an internal wall .....	14
Figure 8 – cracked cornice in which amosite asbestos was detected.....	15

## ACCESSIBILITY

The ACT Government is committed to making its information, services, events and venues as accessible as possible.

If you have difficulty reading a standard printed document and would like to receive this publication in an alternative format, such as large print, please phone 13 22 81 or email [asbestostaskforce@act.gov.au](mailto:asbestostaskforce@act.gov.au)

If English is not your first language and you require a translating and interpreting service, please phone 131 450.

If you are deaf, or have a speech or hearing impairment, and need the teletypewriter service, please phone 13 36 77 and ask for 13 22 81.

For speak and listen users, please phone 1300 555 727 and ask for 13 22 81. For more information on these services visit <http://www.relayservice.com.au/>

© Australian Capital Territory, Canberra, 2014

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without written permission from the ACT Government, GPO Box 158, Canberra ACT 2601.

# Executive Summary

## Mr Fluffy

Since the late 1960s an unknown and perhaps unknowable number of Canberrans have lived in homes affected by loose fill asbestos insulation. Some of them paid to have it installed, but many have only discovered its presence in their homes in recent times. In the late 1980s and early 1990s a joint Commonwealth and Australian Capital Territory (ACT) Government program sought to remove visible and accessible asbestos from affected homes. For a while it was thought by many that the asbestos was gone altogether, or that at least it was confined to roof spaces and wall cavities.

We now know that is not the case.

Loose asbestos fibres remain in the roof spaces, wall cavities, and subfloors of affected homes. In recent times they have also been found, sometimes in visible quantities, in cupboards, heating and cooling ducts and vents, living rooms and bedrooms.

‘Mr Fluffy’ is the commonly used name for the asbestos fluff insulation installed by D. Jansen & Co. Pty Ltd and its successor firms which installed loose fill asbestos insulation between 1968 and 1978–79 in Canberra and, it is believed, the surrounding region. Contemporary advertisements promised ‘sure comfort and fuel savings’ to homeowners who paid less than \$100 to insulate an average 11 square house with what was claimed to be ‘CSIRO Tested and Approved’ as ‘the perfect thermal insulating material’<sup>1</sup>. That material comprised raw asbestos, crushed and blown into roof spaces and allowed to settle across the battens and ceilings, and behind the cornices, of more than 1000 Canberra homes<sup>2</sup>.

It is crucial to the subsequent history of this issue that in this application asbestos was finely crushed and not blended with any other materials. This is because a sample of asbestos fibres just visible to the naked eye contains around 20,000 fibres, and a sample the size of a 50 cent piece up to two million.

The stated claims as to efficacy of Mr Fluffy insulation are true. Asbestos is a very good insulator and fire retardant material, but it has a darker side.

## Historical overview

Between 1989 and 1993, the Commonwealth and ACT Governments undertook a jointly funded program to remove visible and accessible loose fill asbestos insulation from affected homes in the ACT. That program, designed by the Commonwealth before the commencement of self-government for the ACT in 1989, was largely delivered by the newly-formed ACT Government. It has been publicly acknowledged that loose fill asbestos insulation was also installed in a number of properties in Queanbeyan, but it is also understood to have been installed in an unknown number of additional properties in New South Wales (NSW). NSW homes were, however, outside the scope of the original removal program.

The prevailing view at the time of that program, amongst at least some of the owners of affected homes, and notwithstanding disclaimers to the contrary on the program’s completion certificates, was that all loose fill asbestos insulation was removed.

The ACT Government wrote to the owners of affected homes in 1993 and 2005 reminding them of the presence of loose fill asbestos fibres in the structure of their homes. In 2005–06 it also made changes to the presentation of information about affected houses on building files held by the ACT Planning and Land Authority, and in the title searches conducted as part of conveyancing processes. The language of visible and accessible asbestos being removed and residual fibres remaining in the walls remained current in ACT Government documents in 2012–13 when a house that had been missed in the original removal program came to light in the suburb of Downer. It emerged that the level of contamination in the living areas of that house was very significant.

---

<sup>1</sup> See Appendix I

<sup>2</sup> See Appendix II for a contemporary description of that process



The ACT Government again wrote to residents of affected homes in February 2014, drawing on the report of the forensic deconstruction of the Downer house, reminding them of the continuing presence of asbestos fibres in the structure of their homes, and recommending they have an asbestos assessment undertaken. For many owners, the February letter constituted the first time they had been made aware of the fact that theirs was an affected home. That letter was addressed to 'the Resident' so in some cases went unread.

Following increasing public concerns about loose fill asbestos insulation, and the findings of the early asbestos assessments (some of which saw families vacate their homes, in some cases having been so directed in a prohibition notice issued by WorkSafe ACT under the *Dangerous Substances Act 2004*), in July 2014 the ACT Government established its Asbestos Response Taskforce (the Taskforce). The Taskforce's role is to provide a coordinated, comprehensive and compassionate response to this issue across three key functions:

- responding to the needs of affected families including by administering the ACT Government's emergency financial assistance package
- providing information to affected families and the wider community
- providing advice on approaches to securing an enduring solution to the presence of loose fill asbestos insulation in the affected homes.

In pursuit of the third task which is the subject of this report, the Taskforce has received invaluable assistance from Australian Government colleagues in the Department of Employment, Safe Work Australia, the Department of Defence, Comcare, and the Asbestos Safety and Eradication Agency. In preparing this advice, it has also liaised with officials from the Department of the Prime Minister and Cabinet, and the Department of Infrastructure and Regional Development. It has consulted a list of experts recommended for this purpose by the Chief Executive Officer of Safe Work Australia<sup>3</sup>. The Taskforce has also made contact with the United Kingdom's Health and Safety Executive Asbestos Policy Unit and International Unit, which has advised it has limited current experience in relation to loose asbestos insulation in a residential setting. The Taskforce is also liaising with Region 8 of the United States' Environmental Protection Agency with the view to sharing experiences and learnings from that agency's management of asbestos contamination in vermiculite insulation in Libby, Montana.

The Taskforce is particularly grateful for the willingness of asbestos experts to share their knowledge and advice as it has worked through this issue. While there has been from the outset consensus as to the course of action required, this report draws on those discussions and others the Taskforce has had with licensed asbestos assessors and ACT Government colleagues including the Chief Health Officer and Work Safety Commissioner, and constitutes the advice of the Taskforce to the ACT Government. It has, however, been reviewed in its entirety and endorsed by Dr Ian R Gardner MBBS MPH FAFOEM, Senior Physician in Occupational & Environmental Medicine in the Department of Defence.

## Where to now?

More than 20 years on from the original removal program, there exists a more nuanced understanding of the health impacts of exposure to airborne asbestos fibres than existed when that program was being designed, even if the contemporary conclusions in relation to the causal links between exposure and disease that underpinned it have not changed. Certainly, much more is known now about the extent of contamination of affected homes.

The consistently held view throughout the Taskforce's consultations on this issue is that there is no effective, practical and affordable method to render houses containing loose fill asbestos insulation safe to occupy in the long term. It is the similarly consistent view that most houses can, with significant effort, be rendered safe to occupy in the short to medium term. To do so would, however, require a level of restriction of the normal use of a property, vigilance and ongoing assessment and remediation that would be economically and socially unsustainable in the long term and for some people even in the short term.

---

<sup>3</sup> See Appendix III

The Taskforce has concluded, having listened to experts, asbestos assessors, and homeowners, that demolition of affected homes is the only enduring solution to the health risks posed by the presence of loose fill asbestos insulation in homes, and their attendant social, financial and practical consequences. The practicalities of living in homes that cannot easily be worked on or maintained, the already manifest negative market responses from prospective renters and purchasers, the social isolation – self-imposed and otherwise – of people fearful about contamination in their homes affecting family and strangers, and above all the risks to mental and physical health are so great as to demand what at first may seem an extreme response.

The Taskforce recognises the enormous reluctance and sadness with which this advice will be received by owners of affected homes, and that it may indeed be rejected by some. However, if the answer uniformly given when informed people are asked, ‘Would you live in one?’ is ‘No’, then with eyes open about how hard that will be for affected families and for the broader community, it is time to move on. Twenty years ago, significant effort and funds were expended in an ultimately failed attempt to deal with this issue. That cannot be allowed to occur again.

The Taskforce notes that even if demolition were not so strongly recommended, the nature of the work involved in the unavoidable second attempt at cleaning affected homes – which is likely to entail a full internal demolition and rebuild – is very significant and not that much different from that required to completely demolish an affected home. Furthermore, any approach short of demolition will leave loose fill asbestos fibres behind, likely contaminating the subfloor and attached to the remaining structure of houses. These fibres will remain a risk to the health of residents, tradespeople and visitors alike until the home is eventually demolished at the end of its useful life. A second cleaning process also does not deal with the stigma attaching – if not already attached – to affected homes, nor the attendant anxiety and mental health impacts of concerns for the safety and value of homes into the future.

The choice, therefore, is not between minor works now and demolition now: it is between significant works followed by demolition now; or significant works followed by ongoing physical and practical restrictions on the use of homes that will, even when works are completed, still be affected by loose fill asbestos insulation.

Given the original removal program’s unsuccessful attempt to solve this problem, the inevitable second program should, in the view of the Taskforce, place a premium on certainty and comprehensiveness. Above all, and recognising the magnitude of what is being recommended, it must pursue an enduring solution.

## Recommendations

With these criteria in mind, the Taskforce recommends all Canberra homes affected by loose fill asbestos insulation be demolished, and at least their carpets and curtains disposed of as contaminated waste.

In the interests of ensuring other people are not unknowingly exposed to loose fill asbestos fibres in another missed house the Taskforce recommends:

- all owners contemplating any renovations or maintenance work on homes built before 1980 be required to have an asbestos assessment undertaken before any work commences
- the contract of sale for any home built before 1980 include a full asbestos assessment.

Andrew Kefford  
Head – Asbestos Response Taskforce  
August 2014

# What we know about asbestos

Asbestos is regulated in the ACT under the *Dangerous Substances Act 2004*<sup>4</sup>, although obligations in relation to management of the risk of exposure to asbestos fibres also arise under legislation including the *Work Health and Safety Act 2011*<sup>5</sup> and the *Environment Protection Act 1997*<sup>6</sup>.

Asbestos is the name collectively given to six mineral fibres which fall into two broad groups:

- the serpentine group – comprising only chrysotile (white asbestos)
- the amphibole group – comprising amosite (brown asbestos), crocidolite (blue asbestos), anthophyllite, tremolite, and actinolite<sup>7</sup>.

The majority of Canberra homes affected by loose fill asbestos insulation contain amosite. Based on records from the original removal program, a small number contain crocidolite which experts determine poses an even greater risk to health than amosite.

Asbestos is a Class 1 carcinogen and poses a risk to health when fibres of a respirable size become airborne and are inhaled. This occurs most commonly in industrial settings or, in the domestic context when bonded asbestos products (e.g. roof or wall sheeting) are cut or decay or, relevantly for these purposes, asbestos is present as loose fill insulation. It is also the case that ingestion of asbestos fibres has been linked to subsequent disease, although at much lower prevalence rates than when airborne fibres are inhaled.

Asbestos was a relatively cheap, durable and effective insulating material. Due to its ability to withstand heat, erosion and decay, and for its fire and water resistant properties, asbestos was widely used in building materials for houses until it started to be phased out in the 1980s before ultimately being banned. Most jurisdictions introduced a ban on the mining of asbestos and the manufacture, importation and installation of products containing crocidolite and amosite from 31 December 1984. On 31 December 2003, a national ban on all uses of chrysotile asbestos came into effect<sup>8</sup>.

As is the case around Australia, Canberra houses built before 1990 are likely to contain at least some bonded asbestos in a number of locations including the eaves, garage, bathrooms, laundries, and kitchen (including underneath flooring tiles). They may also have asbestos roofing and/or fencing material or pipe lagging<sup>9</sup>.

While asbestos was a common building material in commercial and residential buildings, the Taskforce is aware of only two non-residential properties that contain loose fill asbestos insulation: a former house once used as a childcare centre in Aranda (now closed), and a section of the Ainslie Shops which remains at the time of writing under a prohibition notice from WorkSafe ACT. While friable asbestos fibres have been detected in commercial buildings in Canberra, they are most often the product of decaying bonded or sprayed asbestos products (i.e. asbestos mixed with cement and sprayed onto surfaces usually as a fire retardant material) as opposed to loose fill asbestos insulation.

## Asbestos related disease

There are a number of medical conditions that are known to be caused by inhalation of asbestos fibres including:

- pleural plaques (thickening of tissue around the lungs) which are usually benign and asymptomatic but are a marker of past exposure
- asbestosis (scarring of lung tissue)

4 See <http://www.legislation.act.gov.au/a/2004-7/current/pdf/2004-7.pdf> especially Chapter 3A

5 See <http://www.legislation.act.gov.au/a/2011-35/current/pdf/2011-35.pdf>

6 See <http://www.legislation.act.gov.au/a/1997-92/current/pdf/1997-92.pdf>

7 Asbestos Safety and Eradication Agency (2013) *National Strategic Plan for Asbestos Awareness and Management 2013–2018*. Australian Government, Canberra, p.3

8 Asbestos Safety and Eradication Agency (2013) p.3

9 [http://cdn.justice.act.gov.au/resources/uploads/Asbestos/Publications/Fact\\_Sheets/AA\\_Colour\\_HR.pdf](http://cdn.justice.act.gov.au/resources/uploads/Asbestos/Publications/Fact_Sheets/AA_Colour_HR.pdf)

- lung cancer
- mesothelioma (a fatal malignant tumour that can develop around the lining of the lungs).

Even limited or short-term exposure to asbestos fibres can be dangerous, but exposure does not make development of an asbestos related disease inevitable:<sup>10</sup>

- just because a person has been exposed does not mean they will necessarily develop any asbestos related medical conditions.
- the chance of developing an asbestos related disease increases with the cumulative exposure to asbestos fibres over time.
- most people who develop asbestos related disease have been exposed to a significant quantity of fibres – either infrequently at higher concentrations or through more frequent exposure at lower levels.
- there is no evidence that ‘one fibre can kill’ although the safe level of exposure (if any) is difficult to determine
- cigarette smoking significantly increases the risk of most asbestos related diseases except mesothelioma.

Australia has the highest reported per capita incidence of asbestos related disease in the world, including the highest incidences of mesothelioma. In 2010, 642 Australians died from mesothelioma<sup>11</sup>.

## Is there a safe level of asbestos exposure?

The National Public Health Partnership’s enHEALTH guide *Management of asbestos in the non-occupational environment* states there is ‘no known safe level of exposure to asbestos fibres’<sup>12</sup>. This position is generally adopted by work health and safety regulators around Australia including WorkSafe ACT. While arguably effective in raising awareness of the dangers posed by asbestos, especially in the domestic environment, the incorrect translation of this conclusion into a ‘one fibre can kill’ message complicates the nature of risk communication in relation to asbestos exposure. This has been a feature of community discussions on loose fill asbestos insulation.

The Taskforce notes that in urban settings there is a background level of asbestos fibres present in the air from building materials, natural sources, and historical applications such as in brake pads, which means an adult will inhale between 10 and 100 fibres every hour<sup>13</sup>. For this reason, references to risks and levels of exposure refer to risks above background levels.

Most studies of the health impacts of exposure to asbestos fibres have been conducted in industrial settings. The leading Australian studies of domestic exposure risks come from Wittenoom in Western Australia where crocidolite was mined up until the mid-1960s, and studies of home renovators in Western Australia. The Taskforce acknowledges that a significant number of current and former owners and residents of affected homes have reported undertaking renovation works on their homes without being aware they contained loose fill asbestos insulation.

There are, however, no specific studies of the health impacts of exposure to loose asbestos fibres present as insulation in homes. The ACT Public Service’s Health Directorate is developing an approach to conducting such a study but in the meantime reference is made to the studies mentioned above in the drawing of comparisons of asbestos exposure risk. Those studies indicate that it is relatively rare for an individual to develop asbestos related disease even with significant exposure<sup>14</sup>. However, if large numbers of people are exposed to even a low risk of disease then this increases the probability that one or more people will be

10 <http://asbestosafety.gov.au/top-5-questions-asbestos>

11 Asbestos Safety and Eradication Agency (2013) p.4

12 <http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-asbestos-cnt.htm>

13 Agency for Toxic Substances and Disease Registry (ATSDR): *Toxicological profile for asbestos* (2010). <http://www.atsdr.cdc.gov/ToxProfiles/tp61-c1-b.pdf> accessed June 2014

14 Olsen N, Franklin P, Reid A et al. (2011). Increasing incidence of malignant mesothelioma after exposure to asbestos during home renovation. *MJA.*; 195(5): 271–274 p. 273 graph 3; Hansen J, De Klerk N, Musk A et al. Environmental exposure to Crocidolite and mesothelioma – exposure response relationships. *American Journal of Critical Care Medicine* 1998; 157: 69–75



affected. That is not to suggest that what is being experienced in affected homes is acceptable. It merely serves to provide context in the discussion of the rates of exposure to respirable asbestos fibres over time and the likelihood of contracting asbestos related disease.

There is, however, an important difference between analysis of health risks of historical exposure on the one hand, and determination of what steps might be justified to minimise risks to health and wellbeing from such exposure into the future on the other. While it is not possible to determine the actual likelihood of one or more people developing asbestos related disease if the size of the cohort of people exposed to loose fill asbestos insulation was allowed to continue to increase in the future, it would be likely to increase over time.

In addition to these physical health concerns, the Taskforce recognises the expressed stress, anxiety and guilt experienced by affected families about their physical health and that of their children in particular, as well as in relation to the value of affected homes. The Taskforce also acknowledges the deep community concern about the historical exposure to asbestos fibres of former residents and tradespeople working on affected homes. The significant personal impact and costs of mental health and psychological concerns associated with this issue should not be underestimated, and must figure in the weighing of options for providing an enduring solution in the future.

## Exposure in affected houses

Loose fill asbestos insulation is a particularly dangerous form of asbestos. In this form, the asbestos is friable and is not blended with other binding agents. For this reason it poses a significantly greater risk to health than bonded asbestos which may become friable if cut or decayed, but which is otherwise relatively stable in a domestic setting provided it is well maintained.

Based on evidence gathered from assessments of affected homes undertaken since February 2014, the Taskforce considers the level of exposure to asbestos within affected homes is likely to be higher on an ongoing basis than background levels, and significantly higher in the event of major renovations or accidental damage, and in some cases even without that sort of disruption to the structure of the building. Furthermore, unlike occupational exposure where duration is limited by work patterns, the presence of loose asbestos inside homes presents an ongoing risk to occupants.

# Managing Mr Fluffy

## 1968–1989

Over the course of the 20<sup>th</sup> century, especially in industrial contexts, there was a growing awareness of the risks to health of exposure to asbestos fibres. In July 1968, Mr Gersh Major, a leading industrial hygienist then of the Occupation Health Section, observed having reviewed the installation process being used<sup>15</sup>:

Some thought should be given to whether D. Jansen & Co. Pty. Ltd., should be dissuaded or even prevented from using asbestos as insulation material in houses. Not only are men unnecessarily exposed to a harmful substance in the course of their work, which is against the best public health practices, but there is some evidence that community exposure to asbestos dust is undesirable. This evidence is not completely convincing but is being taken seriously by experts in the field and, in light of the present state of knowledge about the health effects of asbestos, it would be prudent to limit asbestos to essential uses only ... With the present demand for insulation, Canberra may become a large market for asbestos insulation with many people in the community exposed because some asbestos will be carried out of the roof space by air currents.

Later that year the ACT Health Services Branch wrote to the Secretary of the Department of the Interior, and the Secretary-Manager of the National Capital Development Commission that:

It is considered desirable that D. Jansen and Company Pty. Ltd., should be dissuaded or even prevented, if possible, from using asbestos fluff insulation material in houses ... in light of the present state of knowledge of the health effects of asbestos dust, it is prudent to limit asbestos to essential uses only and then in solid form ... In view of the harmful nature of this substance the use of asbestos fluff for the purpose of insulating should be discontinued and less hazardous material such as rockwool, insulwool or fibre glass should be substituted.

During the 1970s concerns were raised from time to time in Canberra, although principally about the impact of exposure to asbestos for workers rather than residents. In 1978, for example, the Capital Territory Health Commission (CTHC) issued a statement that ‘the CTHC did not agree that undisturbed asbestos fluff in place in domestic ceilings poses a health risk to occupants of the dwellings. However, the Commission has for some time opposed use of asbestos fluff for insulation’. That statement concluded that ‘widespread testing of ceiling insulation materials is uncalled for.’

In a paper prepared by the Building Section of the then Department of the Capital Territory in January 1980 canvassing the use of asbestos in buildings, it was noted that:

Following press reports in November 1978 on the subject of the use of sprayed asbestos and asbestos fluff insulation in buildings the Health Commission clarified its earlier advice and said that a distinct hazard to all persons exists unless proper care had been taken to ensure that they do not inhale excessive quantities of asbestos dust ...

The Department of Housing and Construction has decided that sprayed asbestos and asbestos lagging of any kind shall no longer be used in buildings built for the Commonwealth. The National Capital Development Commission has never used asbestos insulation in houses constructed by it and no longer uses sprayed asbestos in buildings.

Through the 1980s there was a growing focus on the presence of asbestos in government buildings, and removal programs were conducted of sprayed asbestos containing products at locations including the National Library of Australia and some Canberra schools. This reflected a growing community understanding of the health risks of exposure to asbestos fibres.

---

15 See Appendix II

## 1989–1993: the original removal program

Reflecting these growing concerns, between 1989 and 1993 the Commonwealth and ACT Governments undertook a jointly funded program to remove visible and accessible loose fill asbestos insulation from affected homes. This program, designed by the Commonwealth before the commencement of self-government for the ACT in 1989 and largely delivered by the newly-formed ACT Government, operated only in the ACT.

The original removal program had three phases:

- surveying the approximately 65,000 Canberra houses then in existence for the presence of loose fill asbestos insulation
- sealing of affected homes at all points where it was considered asbestos could enter into living areas
- removal of loose fill asbestos insulation involving encapsulation of the roof and vacuuming and sealing accessible areas.

Contrary to popular contemporary and indeed subsequent belief, the original program did not, as is now recognised, remove all loose fill asbestos insulation:

- The removal phase involved cleaning loose asbestos from the ceiling cavity and accessible wall cavities, but it was accepted that because of the nature of the task and of asbestos itself it was likely that some asbestos would still be present in places such as internal and external wall cavities, subfloor spaces and behind cornices.
- The inside roof and accessible wall cavities were sealed with a spray designed to bind any remaining asbestos fibres to the structure of the house to minimise the risk posed, but this spray was not able to fully penetrate wall cavities.

In 1991, a Memorandum of Understanding (MOU) was signed by the Commonwealth and ACT Governments in relation to the original removal program<sup>16</sup>. That document recorded the operational and financial parameters for the program, including the intended allocation of financial responsibility between the Commonwealth and ACT Governments. Importantly for current purposes, that MOU records a clear contemplation and intent on behalf of both governments that it may be necessary to remediate further houses in the future, or to return to remediated homes to undertake further work.

## 1993–2012

At the completion of the original removal program, homeowners were provided with information outlining additional obligations placed on them in terms of maintenance and renovation work on their house. At this time owners were made aware that asbestos fibres remained in inaccessible areas of the home, and appropriate precautions must be exercised when undertaking tasks such as replacing power points, removing wall heaters and disturbing walls.

A letter sent to affected homeowners in 1993 specifically advised that ‘residual fibres may remain in wall cavities’<sup>17</sup>. A *Certificate of Completion of Asbestos Removal Work* was provided to homeowners and attached to the building file of affected properties. While stating asbestos had been removed from the house, it also indicated ‘residual fibres may still be present in the wall cavities of the building. Prior approval of the Building Controller is to be obtained for any building work involving the alteration of wall sheeting or external brickwork.’

The ACT Government’s understanding of the impact of loose fill asbestos insulation has continued to evolve over time largely through ad hoc experience. Coinciding with the ban of asbestos products generally, the ACT Government established an asbestos taskforce in the mid-2000s that provided advice to the ACT Government and community on a range of matters including for this purpose, loose fill asbestos insulation. The ACT Government implemented a number of measures – including writing to affected homeowners again – to provide owners of affected properties with information on the possible presence of loose fill asbestos

<sup>16</sup> See Appendix IV

<sup>17</sup> See Appendix V

insulation in the home and the need to take precautions when undertaking activities such as maintenance, renovation and extension or demolition which may release those fibres<sup>18</sup>.

In 2005–06 the ACT Government also introduced the requirement for a contract for sale of a residential property to include a number of documents including a lease conveyancing inquiry report. If the property in question was on the list of homes identified as affected by loose fill asbestos insulation, the lease conveyancing inquiry report indicated that ‘a form of asbestos is or has been present on the land’. The form of words for properties not on the list of remediated homes read, ‘Records held by ACTPLA indicate that loose asbestos was not identified in the ceiling cavities of these premises (but not including any shed or garage on the property) during the government programme conducted in the early 1990’s’.

## 2013–14: From Downer to the Taskforce

Of the five ‘missed’ houses that have been identified since the original removal program, the most recent – a house in Downer – has received the greatest prominence. While the general approach for missed houses had been to remediate to the original program standard, given the degree of contamination inside the Downer home, the ACT Government purchased the building and conducted a forensic deconstruction of it in 2013. That process revealed new information on the extent to which asbestos fibres had migrated through the structure of a house<sup>19</sup>.

Taking account of information that came to light in the Downer house, in February 2014 the ACT Work Safety Commissioner wrote to homes that were part of the original removal program re-emphasising the need for careful management of loose fill asbestos insulation and encouraging homeowners to engage a licensed assessor to provide advice in relation to their property<sup>20</sup>. The Work Safety Commissioner’s letter explained:

- the original remediation program aimed to remove visible and accessible asbestos insulation, but some asbestos insulation material remained in wall cavities, subfloor spaces and behind cornices
- while loose fill asbestos insulation in wall cavities is unlikely to present a risk if left undisturbed, precautions should be exercised to avoid the risk of exposure when undertaking even minor renovations, alterations or repairs within the house.

Following that letter, a number of homeowners privately engaged asbestos assessors to examine their homes. There was no obligation for homeowners to provide a copy of the report to the government or regulators, though some did for the purpose of seeking further advice. Some asbestos assessors notified WorkSafe ACT when fibres were detected in living areas in order to satisfy their duty to report serious events under the *Dangerous Substances Act 2004*.

It also became apparent during the first half of 2014 that assessors and ACT Government agencies were very often interacting with families who were previously unaware that they owned an affected home.

In light of the growing level of concern and feedback from licensed asbestos assessors, meetings were convened in May 2014 between ACT Government agencies including the then Chief Minister and Treasury Directorate (Office of Industrial Relations) and WorkSafe ACT and the Australian Government Department of Employment and Safe Work Australia. The concerns of assessors centred on a lack of consensus and technical advice around robust methodologies for the quantification as distinct from identification of risk, agreed standards for testing for contamination inside affected homes, and appropriate methodologies for demolishing affected homes.

In June 2014, in response to the developing situation including heightened homeowner and community concern about contamination of the living areas of affected homes, relevant ACT Government agencies convened a roundtable of regulators and asbestos assessors. At that time, based on around 200 assessments, the emerging view of affected homes was that:

<sup>18</sup> See Appendix VI

<sup>19</sup> See [http://www.cmd.act.gov.au/open\\_government/foi/cmcd/asbestos-report-on-a-property-in-downer-act](http://www.cmd.act.gov.au/open_government/foi/cmcd/asbestos-report-on-a-property-in-downer-act)

<sup>20</sup> See Appendix VII

- contamination of subfloor areas was uniform (around this time some assessors ceased sampling subfloor areas and presumed contamination in order to focus on potential penetration by fibres to living areas)
- entry of fibres through cracked cornices and other ceiling openings was common
- in some cases visible fibre bundles had been located – especially in the tops of cupboards
- asbestos fibres had been detected in clothing, children's beds, soft furnishings and heating/cooling ducts.

In July 2014 the Chief Minister announced the establishment of the Asbestos Response Taskforce.



# Living with Mr Fluffy – the current state of affected Canberra homes

## Assessment of affected homes

The principal recommendation of the Work Safety Commissioner's February 2014 letter was that homeowners should have an asbestos assessment undertaken by a licensed asbestos assessor. It is clear from the response of recipients of that letter and to a subsequent one sent by the Taskforce<sup>21</sup> that a significant number of current owners of, and residents in, affected homes did not know their house was affected. Another significant cohort had been aware of clearance certificates but had not necessarily appreciated the impact of the disclaimer that residual fibres may remain.

It is also the case that neither ACT Government officials, nor licensed asbestos assessors, understood in the way they now do the extent to which loose fill asbestos insulation fibres remained not only in the structure and subfloors of building, but were also penetrating the living areas.

Following the Commissioner's letter, around 400 asbestos assessments have now been conducted, reports of which are now being provided to the Taskforce.

The following photographs give a sense of the nature of contamination in affected homes.

**Figure 1 – asbestos in an external wall (of an unremediated home)**



Photo courtesy of Robson Environmental

---

21 See Appendix VIII

Figure 2 – asbestos in an interior wall (note new cable penetrating stud at top left)



Photo courtesy of Robson Environmental

Figure 3 – an unremediated roof space





Figure 4 – roof space during remediation



Figure 5 – roof space during remediation (note gap to wall cavity)



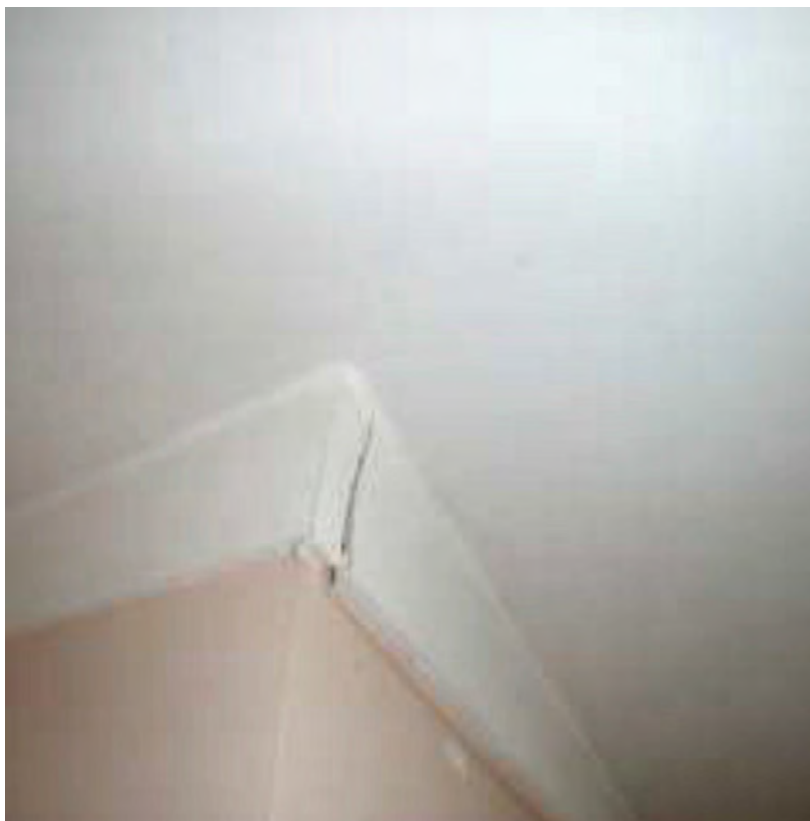
Figure 6 – asbestos remaining behind a cornice



Figure 7 – asbestos in an internal wall



Figure 8 – cracked cornice in which amosite asbestos was detected





# Asbestos assessment reports – an overview

Asbestos assessment reports<sup>22</sup> provide information on the presence of asbestos fibres in a home, as well as suggested approaches to remediation of identified hazards. They generally provide a table setting out details of dust samples taken (including whether or not asbestos is detected and the type) as well as providing a description of the general state of the property.

Risk of asbestos exposure and its likely impact is assessed using a matrix that records the:

- condition encompassing:
  - severe – material in very poor condition
  - poor – deteriorated material and considerable damage
  - fair – minor damage
  - good – well sealed stable material
- risk rating encompassing:
  - very high – exposure to airborne asbestos likely as a consequence of minor disturbance
  - high – exposure to airborne asbestos possible as a consequence of minor disturbance
  - medium – exposure to airborne asbestos unlikely during normal building use
  - low – negligible exposure to airborne asbestos during normal building use.

On this scale detected amosite or crocidolite fibre bundles in a living area generally attract a severe/very high rating.

Assessment reports also provide advice on appropriate remediation of identified hazards. In some cases, these reports have recommended a home be vacated immediately such has been the degree of contamination. In these cases, the Taskforce notes affected properties have been occupied without restriction by families up until the point the assessment was conducted.

Current assessment methods are based on analysis by a National Association of Testing Authorities accredited laboratory of collected surface dust samples and a visual inspection by an assessor, sometimes supported by air monitoring. Airborne fibre monitoring is, however, unlikely to produce elevated results except when undertaken during an uncontrolled internal demolition or wall cavity disturbance. Remediation works following an assessment report are generally limited by the parameters outlined above and are related to observed hazards only. The view expressed by assessors is that increasing the number of samples in any house will simply increase the number of positive results although factors which may affect the likelihood of detecting fibres include:

- the state of the cornices – freshly sealed and painted interiors will make it difficult to find fibre bundles (especially if the window and doorway architrave top ledges are sealed)
- replaced carpets which are unlikely to have accumulated fibre bundles
- hard surfaces which are unlikely to accumulate fibre bundles due to regular cleaning.

Indeed, one of the implications of the fact that there is no known safe level of exposure to asbestos fibres is that questions in relation to long-term sustainability and minimisation or elimination of risk must pass through a yes/no gate rather than a graduated measure based on an assessment of risk and severity of consequence. This position must better guide the formation of any response.

Addressing hazards identified in an assessment makes a house safer than it would otherwise be, but does not eliminate risk entirely or provide a long-term sustainable position. A house that has been tested and remediated could develop a new crack tomorrow allowing fibres to enter the home. Indeed, the Taskforce is of the view that the long-term risks are so great and the remediation approach so complex, that it is better to demolish affected homes and remove the risk than attempt to remediate to moderate risk and manage remaining loose fill asbestos in place.

---

<sup>22</sup> See Appendix IX

## The list

The ACT Government has an advantage in responding to this issue because it knows the location of affected houses remediated under the original removal program. The Taskforce has written to the owners of the around 1030 homes thought to be still standing, but continues to work with the ACT Public Service's Environment and Planning Directorate to conclusively settle that number.

It is important to note in this context that while there is confidence in the list of known remediated homes, it is not possible to provide a definitive 'no' to the question of whether a particular house is affected by loose fill asbestos if it is not on the list. Such an answer can only come from an assessment.

With this in mind, and acknowledging the original program encompassed around 65,000 homes from which five missed homes have emerged to date, the Taskforce recommends:

- all owners contemplating any renovations or maintenance work on homes built before 1980 be required to have an asbestos assessment undertaken before any work commences
- the contract of sale for any home built before 1980 include a full asbestos assessment.

## What do the assessments tell us?

Homes that were part of the original removal program still contain loose fill asbestos fibres. They are uniformly contaminated in the roof space, wall cavities and in the subfloor. More than 50 per cent of homes assessed since February 2014 have had asbestos fibres detected in living areas. While not all homes assessed have had samples taken in subfloor and roof spaces, where they have been taken they have returned positive results.

With this in mind, it is impossible to say with certainty that fibres have not penetrated the living areas in a particular house. It must also be remembered that the test results from samples taken are definitive, but they are only a sample of the whole house.

As at 19 August 2014, 40 families are unable to continue to reside in their homes as a result of asbestos contamination. While the majority of these homes have been affected by amosite asbestos, crocidolite has been found in two.

While there is a delay – due largely to industry capacity constraints and the number of assessments being undertaken – in the timing of receipt of written reports of assessments by homeowners, and then in their provision by homeowners to the Taskforce, the verbal advice to the Taskforce from assessors about more recently assessed homes is in keeping with received reports.

## Common findings

A review conducted by the Taskforce of assessments shows:

- loose fill asbestos insulation fibres that were bonded to surfaces (including roof tiles, trusses, brick and timber) with sealant as part of the original removal program are at increasing risk of becoming friable again due to deterioration of the sealant – and that in some homes this has already occurred
- even homes in good general condition have clear entry points for fibres into living areas
- insulation fibres can migrate to living areas in the absence of damage, alterations, renovations or neglect to the home.

It is an unsurprising finding given the history of the homes that they are contaminated in the roof space, wall cavities and subfloor areas. The impact of subfloor contamination has been more significant where that area contains the garage or a storage area and a number of families have remarked to the Taskforce that they use this space to store the Christmas tree, camping gear, and the rollaway bed for guests.

It is also worth noting in passing that contamination of the soil (while varying from house to house) is a significant concern. At the Downer house, for example, a pre-determined 300 mm of soil was removed from the block to ensure removal of all asbestos contamination. The Taskforce understands 100 mm of soil was removed, consistent with national minimum standards and testing results, after an affected house was demolished in July 2014.

The actual amount required to be removed will vary from site to site, and must be guided by testing results.

## ***Frequent findings***

Common points identified in assessments for the entry of asbestos fibres to living spaces include:

- cracks in cornices (from visible cracks in the plaster including paint cracks) and cracked walls
- tops of built-in wardrobes and other cupboards
- exhaust fans and other openings in the ceiling or walls
- ventilation gaps above refrigerators and microwaves
- light fittings (down lights in particular)
- accessible basement areas via cavity walls in brick veneer homes.

## ***Worst case findings***

In the most extreme cases, where families have left their homes, asbestos (including crocidolite) has been located often in visible quantities:

- in cupboards
- on top of the refrigerator or microwave
- in the heating and cooling system
- in bedding.

## **Assessors' collected observations**

The Taskforce has met on a number of occasions with licensed asbestos assessors, both collectively and individually, to review progress and share learnings.

A defining feature of these conversations has been the extent to which the ACT Government's and assessors' knowledge about the presence of asbestos fibres within the living areas of affected homes has changed over time. A key area of focus has been a deepening awareness of the differences that exist in the quality of the cleaning completed as part of the original removal program between different houses at different times. While understandable in the context of continuous improvement, this factor also correlates with the nature of current contamination within the living areas of affected houses. It would seem to be generally better to have a house cleaned later in the original program than earlier. Unfortunately, however, even where there is evidence of a good clean, fibres are still being detected in living areas.

In a number of cases, assessors have reported not only inconsistent or incomplete application of the bonding spray inside the roof cavity, but that where it has been applied it is showing signs of deterioration. This is understandable 20 years later, but at the same time, increases the likelihood of fibres becoming mobile again and moving through the building structure and into living areas.

Assessors have also pointed out the extent to which the original removal program's specifications which did not permit modification to the structure of the house beyond the removal of roof tiles, means that more asbestos than might otherwise have been the case was left behind in cornice cavities. It has proven to be the case that the volume of fibres that can be seen in the roof space behind cornices is a good predictor of the likelihood of fibres being detected in the living areas.

Another key determinant of the presence of asbestos fibres in living spaces has been the quality of construction of a particular house. Well-constructed homes where the cornices' function is largely decorative in covering a narrow gap between ceiling and wall, generally have a more restricted space through which fibres might enter a living space than a less carefully constructed one. Where the internal linings of cupboards – as has been found – do not join at all or have no cornices, there is a clear path to the internal structure of the house through which fibres can travel.

Assessors have also noted the extent to which the nature of the ground and soil type in particular suburbs renders houses more likely to move and therefore crack. It is also a significant determinant of the extent to which fibres will penetrate the subsoil. Other influences in this regard include the extent to which subfloor

areas have over time been subject to water flows including from blocked or damaged pipes. The propensity of Canberra soil to expand and contract with climatic variation as well as rainfall events is relevant to the enduring sustainability of remediation options into the future.

On more than one occasion it would appear rodents and/or possums have played their role in spreading fibres and opening access pathways for fibres to enter living spaces.

While assessors have, with greater knowledge, been able to better assess the likelihood of fibres being present inside living areas of a particular home, it is not routinely the case that a well-maintained home will return better testing results than a more dilapidated one. It has been the case, for example, that down lights and heating and cooling vents in extensively renovated homes have provided entry pathways for fibres into living areas from the roof and/or subfloor.

A further challenge faced by assessors, and by families seeking to make a judgement about risk, is that there is no reliable way to assess the impact of historical exposure that was not quantified at the time. A significant proportion of affected families have raised concerns about the fact that they may have been exposed to high levels of asbestos fibres during renovation work done either without knowledge, or complete understanding, of the presence of loose fill asbestos insulation in their home. While undeniably relevant to an assessment of the likelihood of exposure leading to a risk of asbestos related diseases, it has proven difficult to provide specific advice to families on assessing risk when it is impossible to know the extent of, rather than the fact of, historical exposure of this sort. Also complicating this task is the fact that in relation to malignant mesothelioma, the time period from exposure to airborne asbestos fibres until the confirmation of the development of disease can be up to 70 years.

It is also impossible to rule out – without a full environmental clean and perhaps not even then – that fibres released through such works or indeed other entry pathways over time will not remain present in soft furnishings including carpets and curtains, and in linen and clothes.

The view has been expressed by more than one assessor that ‘if we look long enough in one of these houses we will find asbestos fibres’. In part, this might be said of all houses, and especially those built before 1990, given the background levels of asbestos fibres in the air and higher risks from decaying bonded asbestos products. Nevertheless, evidence from assessments conducted since February 2014 demonstrates there is a significantly stronger likelihood of higher readings in affected houses. It is also the case that affected homes have, in addition to positive amosite tests, returned positive samples for chrysotile asbestos likely from decayed bonded asbestos products.

Perhaps the most telling response of all from licensed assessors to the current and future risks faced by residents in affected homes has been the numbers who have indicated they would not live in an affected house, nor raise their children in one.

# Removing Mr Fluffy

Having listened to licensed asbestos assessors, experts and homeowners, the Taskforce has concluded that demolition of affected homes is the only enduring solution to the risks posed by the presence of asbestos as loose fill insulation in homes. The practicalities of living in homes that cannot easily be worked on or maintained, the already manifest negative market responses from prospective renters and purchasers, the social isolation – self-imposed and otherwise – of people fearful about contamination in their homes affecting family and strangers, and above all the risks to mental and physical health are so great as to demand what at first may seem an extreme response.

The Taskforce's recommended approach is consistent with the publicly stated views of the Chief Executive Officer of the Australian Government's Asbestos Safety and Eradication Agency, Mr Peter Tighe, that affected homes should be demolished: '... these Mr Fluffy homes are a ticking time bomb as far as I am concerned. There is no amount of cleaning that can be done to make them safe and I certainly would not allow my family to live in one of them.'<sup>23</sup>

None of the experts recommended by Safe Work Australia contradicted that general approach as the only enduring solution.

## Managing risk

It is well beyond the scope of this paper to attempt to canvass all that has been written about the risks posed by asbestos in the industrial and domestic context, or the significant body of academic literature that exists in relation to the consequences of exposure to asbestos fibres. Suffice it to say for these purposes:

- asbestos is a known carcinogen
- there is no known safe level of exposure
- the risk of contracting disease is, in general and subject to genetic predispositions, the cumulative function of intensity of exposure over time
- loose fill asbestos insulation is a particularly dangerous form of asbestos (and even worse in relation to those homes known to contain loose fill crocidolite).

In relation to the affected homes:

- there is a significant body of verifiable evidence that shows not only is asbestos present in the roof space, wall cavities and subfloor, it is consistently penetrating living areas
- any hole or gap in the ceiling, floor or walls is a potential entry point for asbestos fibres
- houses are susceptible to further cracking as they age and climatic variations affect ground stability
- all of them will have a level of contamination of asbestos ranging from higher than background levels to extreme in a smaller number of cases.

Much has been written about approaches to managing risk of exposure to asbestos in the industrial and domestic settings. Safe Work Australia's national *Code of Practice on How to Manage and Control Asbestos in the Workplace*<sup>24</sup> (the Code) outlines principles for managing asbestos. It establishes that when choosing the most appropriate control measure for possible asbestos exposure, the following hierarchy of controls must be considered:

- eliminating the risk (for example, removing the asbestos)
- substituting for the risk, isolating the risk or applying engineering controls (for example, enclosing, encapsulation, sealing or using certain tools)
- using administrative controls (for example, safe work practices)
- using personal protective equipment<sup>25</sup>.

23 <http://www.canberratimes.com.au/act-news/homes-with-mr-fluffy-asbestos-insulation-should-be-demolished-says-safety-chief-20140410-36gcp.html#ixzz39ccpNIHF>

24 <http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/manage-control-asbestos-cop>

25 Safe Work Australia (2011) p.37



The Code also establishes, in relation to friable asbestos, that ‘instances where removal should be of the highest priority would include friable asbestos that is in poor condition and is located in an area where it poses a significant risk of exposure.’<sup>26</sup> It also observes (emphasis added) that ‘specific instances where removal may be the best control measure include:

- asbestos lagging on pipes
- asbestos in plant
- **asbestos-contaminated dust (ACD)**
- **loose fibre insulation**
- cracked or damaged fibreboard containing asbestos<sup>27</sup>.’

## A second removal program

The Taskforce has proceeded on this basis, adopting a precautionary stance that recognises the shortcomings of the original removal program and the lack of knowledge about the actual impact on health of exposure to fibres from loose fill asbestos insulation in a residential setting. The Taskforce also recognises that while the prevalence of asbestos related disease and mesothelioma in particular is low in absolute terms, that is not a reason not to take significant steps to eliminate a potentially grave risk to future health and wellbeing.

Furthermore, the ongoing anxiety about the presence of asbestos fibres and fears parents have for the health of their children in particular, are likely to have a more pressing and immediate impact on the lives of affected families than any future asbestos related disease. The Taskforce has received reports of grandparents refusing to permit their grandchildren to visit the home in which their parents grew up, and school friends not being allowed to visit.

Doing nothing is not an option. Affected homes will require a very significant program of works to remove loose fill asbestos fibres regardless of whether demolition ultimately occurs. Given the original removal program’s unsuccessful attempt to solve this problem, this inevitable second program should, in the view of the Taskforce, place a premium on certainty and comprehensiveness. The Taskforce notes demolition of affected homes was considered and discounted in the design of the original removal program.

In short, there are three choices available:

- demolition – to remove the risk
- a second attempt at cleaning – to reduce the risk
- sealing and cleaning (as a medium-term response to meet individual choice) to manage the risk.

## Demolition

Demolishing affected homes, while a very significant, costly, logistically challenging, and emotionally traumatic approach, provides the only certain and enduring solution to the health risks and attendant social, financial and practical problems created by the presence of loose fill asbestos in Canberra homes. Any option short of demolition carries with it an ongoing management obligation and an unresolved risk that inevitably still present asbestos fibres may once again penetrate living areas and present an exposure risk to occupants living in, or tradespeople working on, affected homes. Demolition avoids all future costs of risk management, assessment, remediation and emergency rectification work.

At the end of the process of demolition and remediation of an affected block (i.e. removal of contaminated soil and replacement with clean fill) the risk of further exposure to loose fill asbestos fibres would no longer exist. Certainly the process of demolition would need to be carefully managed and undertaken with appropriate supervision and proper safety precautions. Nevertheless, there is a consensus amongst experts including licensed asbestos assessors and removalists, that a house affected by loose fill asbestos insulation can be demolished safely. There would likely be differences in methodologies between brick veneer and double brick homes, as the latter may need to be encapsulated in a ‘bubble’, but the outcome would be the same.

---

<sup>26</sup> Safe Work Australia (2011) p.37

<sup>27</sup> Safe Work Australia (2011) p.37

Demolition of affected homes also removes lingering uncertainty about future exposure to asbestos fibres and minimises the risks of social isolation – as has already been observed – through self-imposed restrictions on families and friends visiting affected homes. It also alleviates the ongoing mental health and social costs of uncertainty about future health risks, stigmatisation of affected homes, and concerns about future house values. It has the advantage of providing assurance to tradespeople, personal carers and others who may from time to time work in Canberra homes that they are not at risk of exposure to loose fill asbestos fibres. Of course they will need to remain vigilant in relation to bonded asbestos products and pipe lagging, but the particular dangers of loose fill asbestos to the wider community would have been eliminated in relation to known homes.

Even if demolition were not so strongly recommended, the nature of the work involved in the unavoidable second attempt at cleaning affected homes – which is likely to entail a full internal demolition and rebuild – is very significant and not that much different from that required to completely demolish. Furthermore, any approach short of demolition will inevitably leave loose fill asbestos contamination in the subfloor and attached to the remaining structure of houses that will remain a risk to the health of residents, tradespeople and visitors alike until the home is eventually demolished at the end of its useful life.

It would seem prudent, therefore, to take the final step to demolition in any event, rather than rebuilding a clean internal skin in what would still be a contaminated shell.

The choice, then, is not between minor works and demolition now: it is between significant works followed by demolition now, or significant works followed by ongoing physical and practical restrictions on the use of homes that will inevitably still be affected by loose fill asbestos insulation until they are eventually demolished.

## Even more cleaning

The Taskforce has nevertheless explored options for removing asbestos short of demolition, in part due to the need to recognise that some people may not want to demolish their homes. These approaches take two broad streams:

- a further, more invasive attempt to clean houses – involving in effect internal demolition and rebuild
- a rigorous program of sealing and encapsulation.

Undertaking a second attempt at cleaning would, in effect, necessitate a full internal demolition and rebuild. All internal walls and ceilings could be removed, remaining asbestos vacuumed up, surfaces coated in a bonding agent, and then the internal structures could be rebuilt. It would be difficult in this scenario to be certain that all the contaminated soil had been removed from the subfloor given the need to maintain structural integrity of foundations.

Separately, it has been proposed that an internal lining could be built within the current house to encapsulate the asbestos behind, in effect, a second skin. While theoretically possible, and sometimes done in a commercial setting, there is unlikely to be sufficient room to practically achieve this in a home, and in any event, the restrictions on daily and future use and maintenance requirements would remain.

It has been suggested to the Taskforce that management options of this nature amount to maintaining the current problem for resolution in the future. Considering asbestos was applied as loose fill insulation into difficult to access cavities such as ceiling and wall spaces, and the asbestos has migrated to subfloor cavities, it is considered unlikely that 100 per cent removal of the asbestos could be achieved. Furthermore, it is considered unlikely that even the best industrial vacuum cleaner could achieve 100 per cent removal. If that were the outcome, then the risk of exposure will continue to exist into the future.

While it is theoretically possible to undertake another clean, the question to be answered is, ‘Is this practical in a family home?’ Even if it is practical in the short term, it will ultimately be ineffective and necessitate a third removal and cleaning program at some stage in the future.

## Seal it and leave it there

It is possible to manage the risk of exposure to loose fill asbestos fibres in the short to medium term when perhaps the impacts of mitigation measures might be more tolerable for at least some people. The necessary sealing of all potential entry points for asbestos fibres would involve very significant impositions on the practicalities of life and the ordinary amenity of homes. It is not a solution to risks posed by the inadvertent, deliberate or accidental disturbance of walls, ceilings or seals in place which might be caused by inattentive tradespeople, children (through curiosity, carelessness, exuberance or accident), intervention of animals, general accidental damage, or storm damage or other emergencies.

One particular drawback of this approach is that subfloor areas and wall cavities cannot be sealed off without risking damp, mould and other problems inside affected homes. The roof space could not be entered without special equipment. Even simple maintenance tasks like lighting the pilot light for the central heating would require supervision by asbestos experts.

Such measures amount at best to risk mitigation which might be sustainable in the medium term until a house is eventually demolished. The risks of reopening entry points, and hence recreation of the current circumstances where loose fill asbestos fibres are present in the living areas of affected homes would increase over time as buildings age and soil moves and expands with changing climatic conditions. In addition, the evidence from the original removal program shows that bonding agents break down over time.

The impact on the wellbeing of home owners and residents, on normal social interactions and on normal family life of the likely mitigation measures necessary to prevent all entry of asbestos fibres into living areas are all very significant.

### *What would sealing-up entail?*

A short- to medium-term sealing program might assist in the staging of any program of demolition, but it should not be viewed as a practical long-term solution. A program of this nature could be developed to:

- restrict and seal access to the ceiling cavity
- restrict and seal access to subfloor including:
  - basements and garages
  - storage areas and cellars
  - internal and external vents
- seal all fibre entry pathways from the ceiling to living areas including:
  - all cornices and cracks
  - internal cupboards and wardrobes
  - light fittings, down lights and exhaust fans
  - ducted heating and air conditioning vents
  - ventilation (e.g. bathroom vents, vents or gaps over fridges, microwaves, etc.)
- seal all fibre entry pathways from wall cavities to living areas including:
  - cracks
  - door frames
  - light switches
  - window frames
  - skirtings
  - cavity sliding doors (which would need to be sealed permanently open)
- seal all fibre entry pathways from subfloor to the outside of homes and living areas, including:
  - gaps or holes in floorboards
  - external or internal vents and grills
  - steps or decks that are exposed to the subfloor.

Clearly, interventions of this sort would significantly impact the functionality and liveability of affected homes including by:

- rendering down lights inoperable
- rendering many underfloor garages or storage areas unusable
- rendering air conditioning and heating systems inoperable
- affecting privacy
- impacting the long-term integrity of the structure of homes.

It is worth noting contemporary records indicate a similar program of sealing at the time of the original removal program led to increased moisture in homes and the growth of mould. At the time the government provided fans to affected households as a temporary means to combat the lack of ventilation.

In addition to these measures, residual asbestos insulation within accessible cavities, such as the ceiling space, would also need to be (re)sprayed with an appropriate sealant.

Furthermore, all hard surfaces and hard furnishings within the affected houses would need to be vacuumed using an appropriate filtered industrial vacuum cleaner.

### ***What about soft furnishings?***

Even for short-term habitation, considering (sometimes visible) asbestos has been identified in the living spaces of affected homes, all porous items such as carpets, and soft furnishings such as curtains, lounges, bedding and clothing may have to be removed and disposed of as asbestos contaminated waste. Although clothing could feasibly be washed, there is no validated technique to test that such clothing (and other porous items) are free from asbestos fibres.

It has proven the case that vacuum cleaners, washing machines and dryers cannot be remediated.

Where fibres are detected during an assessment in the living areas of a home, it is reasonable to assume that furniture and other contents may be contaminated. There is no reasonably practicable way of assessing the extent of any contamination or to guarantee decontamination of these possessions. However, providing goods have not been stored in the subfloor or roof cavities, the extent of any contamination is likely to be low.

Considerable distress could be caused by home occupants not being able to take potentially contaminated personal possessions when vacating a home. The Taskforce is developing a proposed approach to dealing with potentially contaminated contents that focuses on safety but also practicality, and supports informed choices being made by affected homeowners. Requiring destruction of all items would be distressing and potentially wasteful, but it is also possible that professional cleaning is not likely to be cost effective in some cases.

It is, however, possible for personal items with hard wettable surfaces to be decontaminated by a licensed asbestos removalist using an approved asbestos HEPA-vacuum cleaner and wet wiping. Soft furnishings, toys, linen and clothing cannot be conclusively decontaminated in this way.

The ACT Government has previously waived tip fees for homeowners who demolish or undertake further remediation of their homes including disposal of contaminated contents.

## **Conclusion**

It is the view of the Asbestos Response Taskforce that all Canberra homes affected by loose fill asbestos insulation should be demolished because there is no effective, practical and affordable method to render them safe to occupy, except perhaps in the short to medium term. Even in that time frame, the risks of exposure to the form of asbestos present in affected homes demand a very significant level of restriction of the normal use of a property.

The Taskforce has reached this conclusion cognisant of the practicalities of the necessary sealing measures, the reality of living in ageing homes that cannot easily be worked on or maintained, the already manifest

negative market responses from prospective renters and purchasers, the social isolation – self-imposed and otherwise – of people fearful about contamination in their homes affecting loved ones and strangers, and above all the risks to mental and physical health.

Any program of demolition will need to take account of the desires of individual families and permit them to make informed choices about their own homes and their own lives. The Taskforce also acknowledges that demolition of more than 1000 homes would be a very significant undertaking and would take a number of years.

The detail of that program is beyond the scope of this paper, but it is something to which the Taskforce has already begun to give consideration on a contingency planning basis.



## Appendix I – Advertisement from 1968

For Sure Comfort and Fuel Savings



**NEW  
'ASBESTOSFLUF'**

The perfect thermal insulating material  
C.S.I.R.O. TESTED AND APPROVED

Greatly reduces internal summer temperature. Retains winter warmth. Large savings on winter heating bills. ASBESTOSFLUF is the perfect insulating treatment for all types of homes, offices, restaurants, machine rooms and other industrial areas, in fact anywhere insulation is desirable. Completely incombustible — 2in thickness of ASBESTOSFLUF has much greater insulating and sound absorbing properties than equivalent thickness of any other type of material. It sprays on to ceiling area quickly and cleanly.



Prices range from \$82.50 for average 11 square home. Finance readily available on 10% deposit with repayments over 12 months.

ASBESTOSFLUF  
a product of  
ASBESTOS COATINGS

Division of  
D. JANSEN & CO PTY LTD  
P.O. Box 6, Lyons, NSW  
Phone 211831

**FREE QUOTATION - NO OBLIGATION**

### The perfect thermal insulating material C.S.I.R.O. TESTED AND APPROVED

Greatly reduces internal summer temperature. Retains winter warmth. Large savings on winter heating bills. ASBESTOSFLUF is the perfect insulating treatment for all types of homes, offices, restaurants, machine rooms and other industrial areas, in fact anywhere insulation is desirable. Completely incombustible — 2in thickness of ASBESTOSFLUF has much greater insulating and sound absorbing properties than equivalent thickness of any other type of material. It sprays onto ceiling area quickly and cleanly.

## Appendix II – Historical Advice



COMMONWEALTH OF AUSTRALIA

**A.C.T. HEALTH SERVICES BRANCH**  
DEPARTMENT OF HEALTH

C.M.L. Building, Darwin Place, Canberra City, A.C.T. Telephone 49 8077 P.O. Box 825, Canberra City 2601

In reply please quote A:3641

20 DEC 1968

The Director,  
Department of Works,  
CANBERRA. A.C.T. 2607

COPY ONLY

Asbestosfluff Insulation

I refer again to your memorandum 68/928 of the 16th July, 1968 wherein you requested a report on the health aspects of asbestosfluff.

It is considered desirable that D. Jansen and Company Pty. Ltd., should be dissuaded or even prevented, if possible, from using asbestosfluff as insulation material in houses. Not only are men being unnecessarily exposed to a harmful substance in the course of their work, which is against the best public health practices, but there is evidence that community exposure to asbestos dust is undesirable.

In the light of the present stage of knowledge of the health effects of asbestos dust, it is prudent to limit asbestos to essential uses only and then in solid form.

It is believed that another company, Bowers Asphalt Pty. Ltd., of Rozelle, is considering commencing operation in Canberra, using asbestos in particle form.

With the present demand for insulation, Canberra may become a large market for use of asbestos in the form of fluff for insulation. Many people in the community will be exposed because some asbestos dust will be carried out of the roof space by air currents.

The results of our investigations have disclosed what appears to be a serious exposure to asbestos dust. In view of harmful nature of this substance the use of asbestos fluff for the purpose of insulating should be discontinued and less hazardous material such as rockwool, insulwool, or fibre glass should be substituted.

(Arthur D. Spears)  
Acting Director

### ASBESTOS HAZARD

On 11th July, 1968, I visited Canberra following a request from the A.C.T. Health Services Branch, to investigate the possible hazards which might arise from the use of asbestos as insulating material for houses. In the company of Dr. M. Ryan, the Medical Officer of Health and Mr. D. Kruger, Chief Health Inspector, I inspected two houses in which this work was being done by the Asbestos Coatings Division of D. Jansen & Co. Pty. Ltd., a Canberra firm. The workmen involved were Mr. M. Calder who described himself as the manager of the Division and a Mr. Jansen, an apprentice plasterer aged about 18 years, the son of the owner. No other workmen are engaged in this work by this company.

#### Method of Use

The principle associated with this work is quite simple: a centrifugal fan mounted in a small motor truck blows asbestos fibre through a 2½ inch diameter p.v.c. hose into the roof space of a house so that the ceiling is covered with a layer of "asbestos fluff" to a depth of 2-2½ inches. About 250 lbs of asbestos is used for the usual three bedroom house and it takes about 1½ hours to do each job; two men insulate 4 houses each day. Two men are engaged in the work, one in the motor truck feeding asbestos from bags into a hopper whilst the other is in the roof space directing the asbestos stream from the hose.

The asbestos is received in paper lined hessian bags containing 100 lbs and is carried in the truck which has a specially made body 7 feet 6 inches long, 6 feet wide and 6 feet 3 inches high. The bags are branded EGNIE Pty. Ltd., South Africa, and bear a shipping mark JH (presumably James Hardie), the asbestos is grade S33 and Mr. Simpson, Chief Chemist of James Hardie Pty. Ltd., has informed me that it is undoubtedly amosite because EGNIE does not mine, package or market any other asbestos mineral. The truck, in addition to carrying the asbestos and other equipment, has a hopper 24 inches x 18 inches x 18 inches which contains a simple device by which the fibres are fluffed up and further opened. The hopper is connected to a 14 inch centrifugal fan driven by a ½ h.p. electric motor and this fan extracts the fibre from the hopper and delivers it to the application hose which is about 50 feet long. The man feeding the hopper is exposed to a considerable cloud of asbestos dust and habitually wears a respirator because of the discomfort. The two men alternate day by day between working in the truck and in the roof space.

The man in the truck opens the bag with a knife and with his hands scoops asbestos into the hopper thus exposing himself to a high concentration of dust. The hopper contains two beaters, a wire brush and a rotary feeding mechanism but most of the dust produced arises from the actions of the man in removing the fibre from the bag and distributing it in the hopper. There is some leakage where the fan joins the hopper and around the fan casing. The hopper, which is the central feature of the machinery through which the fibre passes en route to the roof space, has clearly been designed for the purpose but neither of the two men involved on the day of the inspection knew its history - Mr. Jansen knew only that his father had purchased it secondhand and brought it to Canberra. I think it may have been used for rock wool or fibre glass application at one stage.

In the roof space the man holds the end of the application hose and directs it into the correct place until he estimates the depth of asbestos to be sufficient. This is an extremely dusty environment as would be expected, particularly because the velocity of air through the pipe would need to be about 3000 or 4000 feet per minute in order to carry the asbestos fibre. I was told that the workmen always wear respirators whilst doing this work.

#### Respiratory Protection

On the day of the inspection both men were wearing respirators. The man in the truck was wearing a Minnesota Mining & Machinery Company paper face mask which is of no value for protection against dusts which cause pneumoconiosis. The man in the roof space was wearing a Protector Type R2000



fitted with type R54 filters. This type is suitable for use in some situations where there is a pneumoconiosis risk but on this particular day the filters were placed in the respirator in the wrong way and considerable leakage was clearly evident. The inside of the respirator face piece was covered with asbestos dust as were both inlet and outlet valves but it was not possible to determine whether the valves were faulty because the filters were wrongly inserted.

Both men are clearly exposed to excessive asbestos dust and should take great care to minimise this exposure. Indeed it is unwise for them to be working with this material whilst suitable substitutes, i.e. rock wool and fibre glass, are available. However, if it is necessary for them to persist with the use of asbestos they must pay meticulous attention to respiratory protection. The 3M type face mask must never be used for protection against asbestos dust. It is interesting to note that respirators are worn because the asbestos dust is considered a nuisance, the workmen being ignorant of the harmful aspects of breathing it. The Protector R2000 respirator might be suitable protection for the man in the truck provided he conscientiously maintains it, keeping the valves in good operating condition and the head-harness tight. He could be taught to do this and his motivation could be sufficient but it must be impressed on him strongly that he should check his respirator daily for leaks and other signs of inefficiency.

The man in the roof space is exposed to too high a concentration of dust to rely on an air purification device and he should wear a supplied air respirator, which of course would be preferable for the man in the van. The most suitable respirator would be a half-face piece supplied air device, the air being supplied by an efficient blower. Suitable equipment is supplied by Protector Safety Products, Normalair, IPCO Safety Pty. Ltd., Willson Products and Mine Safety Appliances Ltd.

Some thought should be given to whether D. Jansen & Co. Pty. Ltd., should be dissuaded or even prevented from using asbestos as insulation material in houses. Not only are men unnecessarily exposed to a harmful substance in the course of their work, which is against the best public health practices, but there is some evidence that community exposure to asbestos dust is undesirable. This evidence is not completely convincing but is being taken seriously by experts in the field and, in the light of the present state of knowledge of the health effects of asbestos, it would be prudent to limit asbestos to essential uses only. It is believed that another company, Bowers Asphalt Pty. Ltd., of Rozelle, is considering commencing operations in Canberra, having used asbestos in a similar manner in Sydney for the past 13 years. With the present demand for insulation, Canberra may become a large market for asbestos insulation with many people in the community exposed because some asbestos will be carried out of the roof space by air currents.

*G. Major*  
(G. MAJOR)  
Physicist,  
Occupational Health Section

July 1968.

## Appendix III – Consultation

Emeritus Professor Bruce Armstrong – University of Sydney

Professor Tim Driscoll – University of Sydney

Dr Ian Gardner – Senior Physician in Occupational & Environmental Medicine Department of Defence

Associate Professor Deborah Glass – Monash University

Rosalie Mayo-Ramsay – Consultant at Noel Arnold and Associates (former state coordinator for asbestos and demolition at NSW Workcover).

Peter McGarry – Manager, Asbestos and Occupational Hygiene and Health Unit Work Health and Safety Queensland

Clinical Professor Bill Musk – University of Western Australia

Michael Shepherd – President, Asbestos Industry Association Queensland

Professor Malcolm Sim – Monash University

Brian Sketcher – Asbestos Audits Queensland

Peter Tighe – Chief Executive Officer, Asbestos Safety and Eradication Agency

Michael van Alphen – University of South Australia

### ACT Officials

Mr Mark McCabe – Work Safety Commissioner

Dr Andrew Pengilley – Chief Health Officer

## Appendix IV – Memorandum of Understanding

Attachment A

DATED:

96/14882

BETWEEN:

(not appropriate  
file for this but  
this covers it  
is)

THE AUSTRALIAN CAPITAL  
TERRITORY

("the Territory")

AND:

THE COMMONWEALTH OF  
AUSTRALIA

("the Commonwealth")

---

MEMORANDUM OF  
UNDERSTANDING - ASBESTOS  
REMOVAL PROGRAM

---

ACT Government Solicitor  
1st Floor GIO House  
250 City Walk  
CANBERRA CITY ACT 2601

Ref: DT/90-3-16216



## MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING BETWEEN THE AUSTRALIAN CAPITAL TERRITORY ("the Territory") AND THE COMMONWEALTH OF AUSTRALIA ("the Commonwealth") made the 7<sup>th</sup> day of June 1991

### 1. PREAMBLE

- 1.1 In 1988 the Commonwealth developed and commenced conducting a program for the identification sealing and removal of loose asbestos fluff insulation from certain affected Territory residential properties ("the Program").
- 1.2 Responsibility for the conduct of the Program was transferred to the Territory upon self-government on the basis that the Commonwealth would contribute towards the funding of the Program.
- 1.3 This Memorandum records the funding arrangements for the Program as determined by the Commonwealth and the agreed arrangements between the Territory and the Commonwealth concerning administration of the Program.

### 2. DEFINITIONS AND INTERPRETATION

- 2.1 In this Memorandum the following words shall, unless the context indicates otherwise, have the meanings shown below:

"Funding formula" means the following formula for funding the cost of the Program adopted by the Commonwealth on 10 October 1988 that:

the Territory pay the first \$10 million of costs,

the Territory and the Commonwealth share, dollar for dollar, the next \$20 million of costs; and

thereafter the costs to be apportioned \$2 to \$1 by the Commonwealth and the Territory respectively.

"Self-Government" means the date from which the Territory became a separate body politic namely 10 May 1989.

"Territory" means according to the context in which it appears either the geographical area known as the Australian Capital Territory or the body politic established under section 7 of the Australian Capital Territory (Self-Government) Act 1988.

- 2.2 Headings are for assistance only and shall be of no legal effect.

3. EXCLUSION

The parties agree that this Memorandum reflects the funding arrangements determined by the Commonwealth and nothing herein should be interpreted or construed as apportioning any liability between the Territory and the Commonwealth arising out of the installation of asbestos insulation in Territory dwellings.

4. ACKNOWLEDGEMENT

The parties acknowledge that conduct of the Program prior to the date of this Memorandum has been on the basis of the understandings set out in this Memorandum and that the Funding Formula set out in this Memorandum also applies to that part of the Program conducted before the date of this Memorandum. Commonwealth contributions to the program to the date of signing total \$12.96 million.

5. RESPONSIBILITIES

The parties agree that the Territory, through the Department of Urban Services will continue to be responsible for the implementation and administration of the Program and that the Commonwealth will contribute in accordance with the funding formula towards the cost of the Program.

6. LEVEL OF SERVICE

6.1 The level of service to be provided by the Territory under the Program is as follows:

- the survey of all residential properties in the Territory built before 1980 to determine which residential properties have asbestos insulation, and

- the sealing up of all affected residences and removal of all visible and accessible loose asbestos fluff insulation from affected residential properties in the Territory.

6.2 In respect of the owners of residential properties affected by the Program who are assessed by the Territory to be suffering financial hardship the Territory may reimburse all or part of the cost of alternative accommodation for those owners during the period in which the owner's residential property was affected by the Program. The Territory will include in reports submitted under clause 8.3 relevant details of all such assessed cases.

6.3 The parties agree that should it become necessary at any time to expand the Program to further residential properties or to subsequently remove additional asbestos from properties previously subject to the Program ("the Additional Program"), all costs associated with the Additional Program will

be calculated in accordance with the terms and conditions of this Memorandum of Understanding.

## 7. COSTS AND PAYMENTS

7.1 The Territory will provide to the Commonwealth estimates of fortnightly cash requirements under the program prior to the commencement of each financial year and at other times as reasonably requested by the Commonwealth.

7.2 Upon agreement by the Department of Arts, Sport, the Environment, Tourism and Territories that the estimates provided under 7.1 are reasonable and in accord with the agreed amount under 7.5, the Department of Arts, Sport, the Environment, Tourism and Territories will pay the Territory fortnightly in advance in accordance with the Funding Formula and the estimates of cash requirements provided to it by the Territory. Adjustments necessary as a result of quarterly reports of expenditure under 8.3 will be effected in subsequent payments.

7.3 Adjustments for over and under payments in a financial year shall be made in the ensuing financial year.

7.4 In paying the Territory the Commonwealth's share under the Funding Formula, the Commonwealth contribution will cover costs incurred by the Territory in the nature of:

- costs directly involved in identification, removal and sealing of loose asbestos fluff insulation from residential properties in the Territory;

- accommodation costs for assessed hardship cases; and

- corporate overheads calculated in accordance with Attachment A to the "Guidelines for Costing of Government Activities" reduced by those items identified as direct expenses.

7.5 The parties agree that the amount to be paid by the Commonwealth under this Memorandum for subsequent financial years will be agreed annually and will take into account progress to date with the Program.

## 8. REPORTING

8.1 The Territory will provide to the Commonwealth a copy of an audited financial statement against the line items appearing at Annex A detailing receipts and expenditure associated with the administration of the Program.

8.2 The statement referred to in clause 8.1 will be provided to the Commonwealth within 6 months after the end of each financial year.

- 8.3 The Territory will report quarterly on receipts and expenditure against the line items appearing at Annex A, and on progress of works under the Program.
- 8.4 The Commonwealth and the Territory may agree to amend cash flow estimates referred to in 7.3 as a consequence of information contained in the reports referred to in 8.1 and 8.3.

9. INDEMNITY

The Commonwealth hereby indemnifies and agrees that it will continue to indemnify the Territory, its servants and agents from and against all actions, claims, suits or demands brought, maintained or made against the Territory, its servants and agents arising out of or connected with the performance of the Program or any Additional Program together with any costs associated with defending or settling such actions, claims, suits or demands.

10. TERM OF MEMORANDUM

This Memorandum will commence on 10 May 1989 and will cease upon the completion of the Program or if the Program is extended under clause 6.2 upon the completion of the Additional Program.

11. VARIATIONS TO THE LEVEL AND TYPE OF SERVICES

- 11.1 The terms of this Memorandum may be varied or amended by written agreement between the Commonwealth and the Territory.
- 11.2 If any change in the Funding Formula referred to in this Memorandum is required by either party, it will be the subject of separate negotiations and agreement between the appropriate Ministers of the Territory and the Commonwealth.

12. NOTICES

- 12.1 Any correspondence to be given for the purposes of this Memorandum shall be deemed to have been duly given if delivered personally, or by being left at, or posted by ordinary prepaid mail or sent by facsimile transmission where appropriate to the following address or to the party's last known facsimile number:

(a) The Territory:

General Manager,  
City Operations Branch  
PO Box 574  
KINGSTON ACT 2604  
(Facsimile No: 295 6717)



(b) The Commonwealth:

Director  
National Functions Section  
Department of the Arts, Sport the  
Environment, Tourism and Territories  
GPO Box 787  
CANBERRA ACT 2601  
(Facsimile No: 274 1368)

12.2 Payments under this Memorandum should be made to the Territory:

C/- Assistant Under Treasurer  
Capital Markets and Accounting  
ACT Treasury  
PO Box 293  
CIVIC SQUARE ACT 2608

12.3 A notice, payment or receipt:

if posted, shall be deemed to be received three days after posting; or

if sent by facsimile transmission, shall be deemed to be received  
upon completion of that transmission; or

if collected by hand, shall be deemed to be received at the time of  
collection.

itory

alf of THE  
ITAL TERRITORY

) B. Dockrill  
)  
) Bruce Dockrill  
) Director  
) City Services Group  
) Department of Urban Services

tness [Signature]

Signed for and on behalf of THE  
COMMONWEALTH OF AUSTRALIA  
in the presence of:

) Cathy Santamaria  
)  
)

Witness [Signature]

) Cathy Santamaria  
) First Assistant Secretary  
) Corporate Management and  
Territories Division  
Department of the Arts, Sport,  
the Environment, Tourism  
and Territories



## ANNEXURE A

### Salaries

- above the line
- below the line

### Wages

- above the line
- below the line

### Superannuation

- on salaries
- on wages
- 3% productivity benefit

### Workers Compensation

### Office Accommodation

### Payments to Contractors

### Reimbursement to Residents

### Other Operating Expenses (to be identified)

### Corporate Support in accordance with clause 7.4(ii)

### Less

- Receipts (to be identified).

## Appendix V – 1993 Letter



### CITY OPERATIONS BRANCH

#### ASBESTOS PROGRAM

PO Box 574, Kingston, ACT 2604

Telephone: (06) 239 6276

Facsimile: (06) 295 6717

#### NOTICE TO ALL ASBESTOS REMOVAL HOUSEHOLDS

Now that the Asbestos Program is drawing to a close, it is opportune to let householders and owners know the administrative arrangements for the future.

In July 1993, the asbestos removal process will be completed on all houses in the ACT, and the operations of the Asbestos Program will be scaled down accordingly. The warranty period for the last house treated will expire in December 1993 and the Program will maintain a facility to service the need until that date.

It is anticipated that the Asbestos Program will move from its office in Carpentaria House in Kingston in September 1993. However, PO Box 574 Kingston and the telephone number will remain operable.

A copy of the Certificate of Completion of asbestos removal from your house will be placed on the appropriate 'Building Control' file.

Prior to undertaking any building alterations to internal or external walls or ceilings, please contact 'Building Control' to ascertain any specific requirements of the building regulations.

'Building Control' offices are located:

Cnr Lysaght &  
Hopkins Streets  
Mitchell ACT 2911

"Old Woden TAFE"  
Callum Street  
Phillip ACT 2606

Cnr Scollay &  
Oakden Streets  
Tuggeranong ACT 2901

Ph: 207 6262

Ph: 207 6277

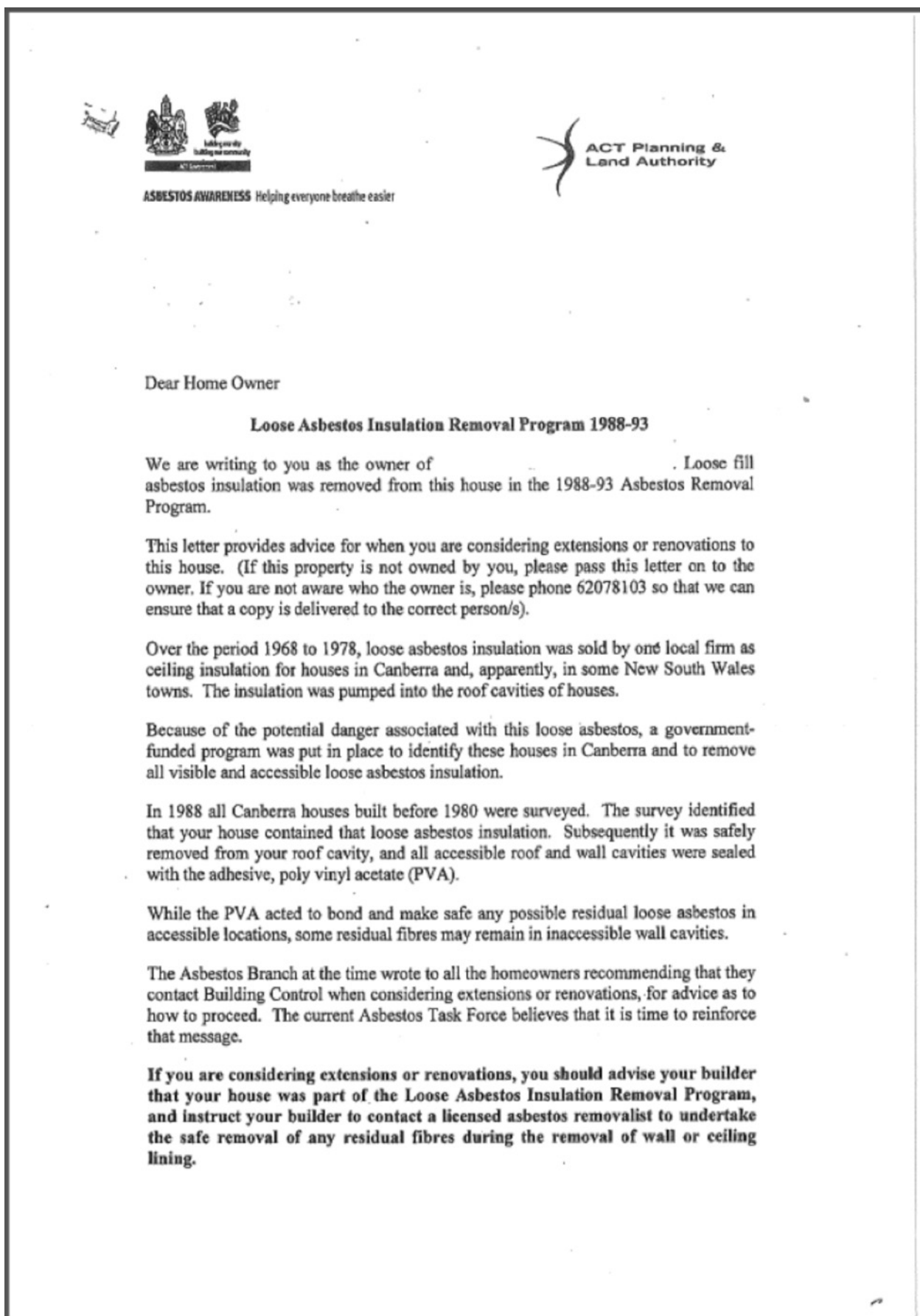
Ph: 207 5969

DEREK HYDE  
MANAGER ASBESTOS

6 JULY 1993

ACT Government - Department of Urban Services

## Appendix VI – 2005 Taskforce Letter



If you are undertaking this work yourself, contact a licensed removalist direct. Asbestos removalists are listed in the Yellow Pages telephone directory under 'Asbestos'. Asbestos removalists should contact a building certifier regarding building approval for this work.

If you wish to obtain a copy of documents relating to the Asbestos Removal Program from your Building File, an application form is attached to this letter.

If you have queries about your building file, please contact the ACT Planning and Land Authority;

- By phone on (02) 62076262,
- By post to GPO Box 1908 Canberra ACT 2601,
- via e-mail to [ACTPLAIS@dpa.act.gov.au](mailto:ACTPLAIS@dpa.act.gov.au)
- or in person at the Mitchell Customer Service Centre, Corner Hoskins & Lysaght Streets Mitchell. Please bring a copy of this letter with you.

New laws apply to home owners regarding asbestos. Information about these new laws is provided in the booklet accompanying this letter.

Yours sincerely



Neil Savery  
Chief Planning Executive  
ACT Planning and Land Authority



Lincoln Hawkins  
Chief Executive  
Asbestos Task Force



## Appendix VII – Work Safety Commissioner's February 2014 Letter



RESIDENT  
No. STREET  
SUBURB ACT XXXX

Dear Resident

### Loose-Fill Asbestos Insulation

I am writing to you because our records show that asbestos insulation was removed from your residence in the Loose-Fill Asbestos Insulation Removal Program ('the Program') that operated from 1988-93. Friable asbestos products such as this insulation are dangerous if disturbed because the asbestos fibres can become airborne very easily, and may be inhaled by people living or working in the vicinity.

The purpose of this letter is to remind you that your home was part of the Program. This means that certain precautions should be taken when undertaking work on your house.

The Program aimed to remove *visible and accessible* asbestos insulation. It was not designed to remove all of the asbestos insulation. It is likely that some asbestos insulation material remains in these homes, including in places such as internal and external wall cavities, subfloor spaces and underneath cornices.

While loose-fill asbestos insulation in wall cavities is unlikely to present a risk if left undisturbed, precautions should be exercised to avoid the risk of exposure when undertaking even minor renovations, alterations or repairs within the house e.g. replacing power-points, cabling, removing wall heaters and disturbing walls in any way.

Because of the potential dangers of this form of asbestos, I recommend that you engage the services of a licensed Asbestos Assessor to obtain an Asbestos Assessment Report. Licensed Asbestos Assessors can provide you with an assessment and ongoing management plan for any forms of asbestos in your home. This is particularly important if you intend to undertake renovations, maintenance work or accessing sub-floor areas (e.g. for storage). In obtaining a report you should advise the Assessor that your home was part of the Program.

Areas where it is possible that the Assessor may find asbestos fibres from the insulation include:

- the underside and laps of tiles;
- tile battens;
- structural timbers;
- the subfloor;
- wall cavities (internal and external); and
- behind cornices.

Further, if you are considering maintenance, alterations, extensions or renovations, you should advise any persons you may arrange to do the work, such as tradespeople, that your house was part of the Program and that there are likely to be asbestos fibres present. You must also provide them with a copy of any Asbestos Assessment Report. Only a licensed Asbestos Removalist should be engaged to undertake the removal of any asbestos.

A list of licensed Asbestos Assessors and Removalists can be found on the Environment and Sustainable Development Directorate (ESDD) website at the following web address [www.actpla.act.gov.au](http://www.actpla.act.gov.au). (Only the assessors and removalists on this list are licensed in the ACT.)

It is important to note that Building Reports should not be relied on to provide information about whether there is asbestos in properties. Only licensed Asbestos Assessors are permitted to provide advice on the presence of asbestos or asbestos containing materials.

Finally, please note that homes built before 1990 are also likely to have other materials present which contain asbestos in them. The Program was limited to the removal of visible and accessible loose-fill asbestos insulation and did not extend beyond that. I am enclosing three fact sheets on loose-fill asbestos insulation in the ACT which are currently available on the ACT Government asbestos website [www.asbestos.act.gov.au](http://www.asbestos.act.gov.au). This website provides a broad range of information relating to asbestos, asbestos containing materials and the management of this substance.

If you wish to discuss any of the aspects relating to loose-fill asbestos, you can contact Canberra Connect on 13 22 81. Canberra Connects operating hours are:

Monday to Friday:	7am to 8pm
Saturday:	8am to 5pm
Sunday:	9am to 5pm

Alternatively, there is an online form available at [www.act.gov.au/loosefillasbestosinsulation](http://www.act.gov.au/loosefillasbestosinsulation). If you do not have access to the internet, a Canberra Connect operator will assist you to complete the form. A response to your enquiry will be provided as soon as possible.

If this property is rented out, please ensure the owner, through your managing agent is aware of the contents of this letter.

Yours sincerely

Mark McCabe  
ACT Work Safety Commissioner  
18 February 2014



# Appendix VIII – Asbestos Response Taskforce

## July 2014 Letter

### **Important information from the ACT Government regarding Loose-fill asbestos insulation (Mr Fluffy Insulation) at:**

#### **«Street Address», «Suburb»**

This letter confirms the property listed above is on the ACT Government's register as having been part of the Loose-fill Asbestos Insulation Removal Program that took place between 1988 and 1993. This was outlined in a letter sent to the affected properties by the ACT Work Safety Commissioner in February 2014, which recommended property owners engage a licensed asbestos assessor to undertake an assessment of the property.

Since then, the ACT Government has established the Asbestos Response Taskforce to address the legacy issues of loose-fill asbestos (commonly known as 'Mr. Fluffy' insulation) in Canberra homes. To property owners receiving this information for the first time, it is important that you register with the Taskforce as soon as possible so that we may begin providing assistance to you. The Taskforce has sent this letter by Registered Post so it is able to be confident that all affected homeowners are aware of their property's status and the Taskforce is able to offer assistance and advice.

The Loose-fill Asbestos Insulation Removal Program was designed and commenced by the Commonwealth Government, as the responsible government for the Australian Capital Territory at that time, and was completed by the ACT Government following selfgovernment in 1989. Homes that were part of this program (commonly known as 'Mr. Fluffy' houses) had visible and accessible asbestos insulation removed.

Since February, at the prompting of the Work Safety Commissioner, a number of properties have undergone further assessment. Some of these assessments have recommended further remediation and in some cases, that properties be vacated.

It is important to remember that each property is different and assessments by licensed assessors should inform the course of action for each property owner.

### ***ACT Government Asbestos Response Taskforce***

As a resident or owner of a house affected by loose-fill asbestos, it is important you register with the Asbestos Response Taskforce if you haven't already done so. This can be done online at [www.act.gov.au/asbestostaskforce](http://www.act.gov.au/asbestostaskforce) or by calling Canberra Connect on 13 22 81. Once you have registered with the Taskforce you will be contacted by one of our team members and we will start the process of working with you to progress actions appropriate for your property. There will also be regular information provided to you through the Taskforce Newsletter.

### ***Emergency Financial Assistance***

The Chief Minister announced a package of assistance for families whose homes are affected by loose-fill asbestos on 3 July 2014. Information on these announcements can be found on the Taskforce website at [www.act.gov.au/asbestostaskforce](http://www.act.gov.au/asbestostaskforce). The announced package includes the following components.

1. Grants of up to \$10,000 per household are available to families who are required, on the advice of an asbestos assessor, to leave their home. An additional \$2,000 is payable for each dependent child residing in the home. The purpose of these funds is to cover the costs of emergency accommodation, immediate remediation work and other necessities such as food and clothing.
2. For families having to leave their place of residence on the advice of an asbestos assessor, the ACT Government will defer rates on that property for the period of time the owners are required to vacate.
3. Families who are able to remain in their home, but on the advice of an asbestos assessor, have needed to destroy contaminated items (such as clothes and soft furnishing items) may access up to \$1,000 to assist with those costs.
4. The Taskforce will arrange and pay for asbestos assessments to be conducted on all affected homes (or will reimburse the cost of asbestos assessments undertaken since 18 February 2014).

5. To access these financial packages you need to be registered with the Taskforce and where practical, retain a copy of your receipts.

## Support

In addition to the financial assistance being offered there are other support services which are available to both adults and children who would find it useful.

A range of options are available and include:

- The NewAccess Program is provided at no cost through the ACT Medicare Local and offers support from trained coaches for those who are experiencing mild anxiety or depression. People registered with the Asbestos Response Taskforce can self-refer to this service by phoning the central intake number on (02) 6287 8066. The coaches provide evidence based, low intensity psychological strategies and support, either face to face or over the phone, for up to six sessions.
- ACT Medicare Local will ensure priority access to NewAccess coaches and *HealthinMind* psychologists for people registered with the Asbestos Taskforce.
- For anyone experiencing moderate anxiety or depression, your family doctor can complete a mental health treatment plan and provide referral for free sessions with a psychologist under the ACT Medicare Local's *HealthinMind* program. For those living in an affected house any 'gap' fee for the family doctor visit will be reimbursed to ensure that there is no out-of-pocket expenses.
- For any urgent/crisis mental health concerns, particularly in relation to acute stress and/or risks to the immediate safety of individuals, please contact the Mental Health Triage intake line on 1800 629 354.
- Your family doctor and their practice staff will also be able to assist you with information about the risks to your physical health of potential asbestos exposure.

Other supports available include:

- Lifeline (24 hours) 13 11 14.
- School Counsellors.
- Employee Assistance Program (EAP).

## Information

A number of families have asked if there is an obligation on them to inform other people about the presence of loose-fill asbestos in their home. The short answer to that question is yes.

Under the *Dangerous Substances Act 2004*, a person who is in control of premises and is aware of the presence of asbestos in a property has an obligation to take all reasonable steps to minimise the risk which arises. This may include informing people who may be affected, such as tenants and tradespeople, of that fact.

Further, if an asbestos assessment report has been completed, the owner or occupier is required to provide a copy to potential buyers, tenants and tradespeople engaged to undertake work at the premises.

If your home is tenanted or currently listed for sale, you should inform your real estate agent (or tenant/buyer if you don't have a real estate agent) of the contents of this letter as soon as possible. The Taskforce has been working with the Work Safety Commissioner and the Office of Regulatory Services to provide guidance and briefings to the Real Estate Institute in this regard.

If you are undertaking any work on your home such as repairs or alterations, you should inform your builder as soon as possible.

If you have further questions about the information provided in this letter or require the assistance of an interpreter, please contact the Taskforce through Canberra Connect on 13 22 81, [www.act.gov.au/asbestostaskforce](http://www.act.gov.au/asbestostaskforce) or [asbestostaskforce@act.gov.au](mailto:asbestostaskforce@act.gov.au).

Yours sincerely

Andrew Kefford  
Head - Asbestos Response Taskforce

# Appendix IX – Sample Asbestos Reports

Example 1: no fibres detected in living areas, contamination in subfloor

Table 1 - ACM Register

	Asbestos containing material
	Non- asbestos containing material

Sample Number	Photo no.	Location description	Material Assessment			Fibrous Content	Recommend Action
			Material	Type	Condition		
FRIABLE ASBESTOS							
E0535	1	Sub-Floor (Front) – Dust to brick ledge	Dust	Friable	Poor	Amosite Asbestos	Restrict access until remediated
E0536	2	Sub-Floor (Rear) – Dust to brick ledge	Dust	Friable	Poor	Amosite Asbestos	Restrict access until remediated
BONDED ASBESTOS							
E0528	-	Bathroom – Cream vinyl floor tiles	VFT	-	-	No Asbestos Detected	No action required
E0529	-	Roof Space – Dust to hatch panel	Dust	-	-	No Asbestos Detected	No action required
E0530	3	Bathroom Wall	Sheet	Bonded	Good	Chrysotile Asbestos	Maintain
RA- E0530	-	Toilet Wall	Sheet	Bonded	Good	Chrysotile Asbestos	Maintain
E0531	-	Laundry Wall	Sheet	Bonded	Good	Chrysotile Asbestos	Maintain
E0532	4	External Eaves	Sheet	Bonded	Fair	Chrysotile Asbestos	Seal & maintain
RA- E0532	5	External gable end corrugated sheets	Sheet	Bonded	Good	Chrysotile Asbestos	Maintain
RA- E0532	6	External sheet above window and roof verge undercloaking	Sheet	Bonded	Good	Chrysotile Asbestos	Maintain
E0533	-	External Decking Gate	Sheet	-	-	No Asbestos Detected	No action required

## Example 2: some fibres detected in living areas

### SURVEY FINDINGS

A register of sampled materials is presented in Table 2 below.

Table 2: Material Register

Sample Number	Item no.	Location description	Material	Type	Risk Rating	Fibrous Content	Required Action
X0272	9900168-1	Basement flat - kitchen cornice cracks	Dust	Friable	1B	Amosite Asbestos	Restrict access until Environmental clean conducted
X0273	-	Basement flat – hall cornice cracks	Dust	-	-	No Asbestos Detected	-
X0274	-	Return air vent grille	Dust	-	-	No Asbestos Detected	-
X0275	-	Upstairs floor vents	Dust	-	-	No Asbestos Detected	-
X0276	9900168-2	Upstairs – hall cupboard cracks	Dust	Friable	1B	Amosite Asbestos	Seal cupboard until Environmental clean conducted
X0277	9900168-3	Holly's room – wardrobe cracks	Dust	Friable	1B	Amosite Asbestos	Seal wardrobe until Environmental clean conducted
X0278	9900168-4	Bathroom ceiling vents	Dust	Friable	1B	Amosite Asbestos	Restrict access until Environmental clean conducted
X0279	9900168-5	Garage - gaps in cornice	Dust	Friable	1B	Amosite Asbestos	Restrict access until Environmental clean conducted
Presumed	9900168-6	Sub floor area	Dust	Friable	1B	Contamination has consistently been found in Sub floor areas	Prevent access until removal works can be conducted

Sample Number	Item no.	Location description	Material	Type	Risk Rating	Fibrous Content	Required Action
Presumed	9900168-7	Ceiling space	Presumed Dust	Friable	1B	Contamination has consistently been found where the PVA paint has not been applied thoroughly	Prevent access until removal works can be conducted

Asbestos containing material
Presumed asbestos containing material (VA)
Non- asbestos containing material



### Example 3: significant contamination detected (crocidolite asbestos)

#### SURVEY FINDINGS

Table 2: Material Register

Sample Number	Item no.	Location description	Material	Type	Risk Rating	Fibrous Content	Required Action
S0831	-	To vacuum cleaner	Dust	-	-	No Asbestos Detected	-
S0832	9900171-1	To ceiling in hallway cupboard	Dust	Frable	1B	crocidolite Asbestos	Seal cupboard until Environmental clean conducted
S0833	-	To return air for central heating in hallway	Dust	-	-	No Asbestos Detected	-
S0834	9900171-2	To ceiling in cupboard to Johnny's room	Dust	Frable	1B	crocidolite Asbestos	Seal cupboard until Environmental clean conducted
S0835	9900171-3	To cupboard ceiling in master bedroom	Dust	Frable	1B	crocidolite Asbestos	Seal cupboard until Environmental clean conducted
S0836	9900171-4	To cupboard ceiling in bedroom/study	Dust	Frable	1B	crocidolite Asbestos	Seal cupboard until Environmental clean conducted
S0837	-	To sliding door cavity to laundry	Dust	-	-	No Asbestos Detected	-
S0838	-	Below cracked cornice in the kitchen	Dust	-	-	No Asbestos Detected	-
S0839	9900171-5	Below wall where old heater had been removed to the lounge room	Dust	Frable	1B	crocidolite Asbestos	Restrict access until Environmental Clean conducted
S0840	9900171-6	To heating vent in floor to the lounge room	Dust	Frable	1B	crocidolite Asbestos	Do not use heat system until Environmental clean conducted
S0841	9900171-7	To heating vent in floor to the dining room	Dust	Frable	1B	crocidolite Asbestos	Do not use heat system until Environmental clean conducted

Sample Number	Item no.	Location description	Material	Type	Risk Rating	Fibrous Content	Required Action
Presumed	-	Sub floor area	Dust	Frable	1B	Contamination has consistently been found in Sub floor areas	Prevent access until removal works can be conducted
Presumed	9900171-8	Ceiling space	Dust/Paint flakes	Frable	1B	Contamination has consistently been found where the PVA paint is flaking	Prevent access until removal works can be conducted

Asbestos containing material
Presumed asbestos containing material (VA)
Non- asbestos containing material



# Bibliography

ACT Government Asbestos Information – <http://asbestos.act.gov.au/>

Asbestos Safety and Eradication Agency – <http://asbestossafety.gov.au>

Asbestos Safety and Eradication Agency, *National Strategic Plan for Asbestos Awareness and Management 2013–2018*. Australian Government, Canberra, 2013.

Safe Work Australia, *Model Code of Practice - How to Manage and Control Asbestos in the Workplace*, Australian Government, Canberra, 2011.

Safe Work Australia – <http://www.safeworkaustralia.gov.au>