



Asbestos fire contamination

In Western Australia asbestos was extensively used in building products nearly until 1990. Therefore many older residential and commercial buildings may contain asbestos, mainly as cement sheeting in walls, ceilings, eaves, fences and roofs. If these are burnt it can lead to the spread of asbestos contamination which needs to be managed.

However, if asbestos contamination is properly managed it poses virtually no risk to the public.

Fire and Asbestos

There are countless fires in WA each year in urban and rural areas. Sometimes these occur as major bushfires affecting many buildings. Although asbestos present does not burn, it may be physically damaged during a fire and possibly disperse into adjacent areas.



Asbestos Contamination

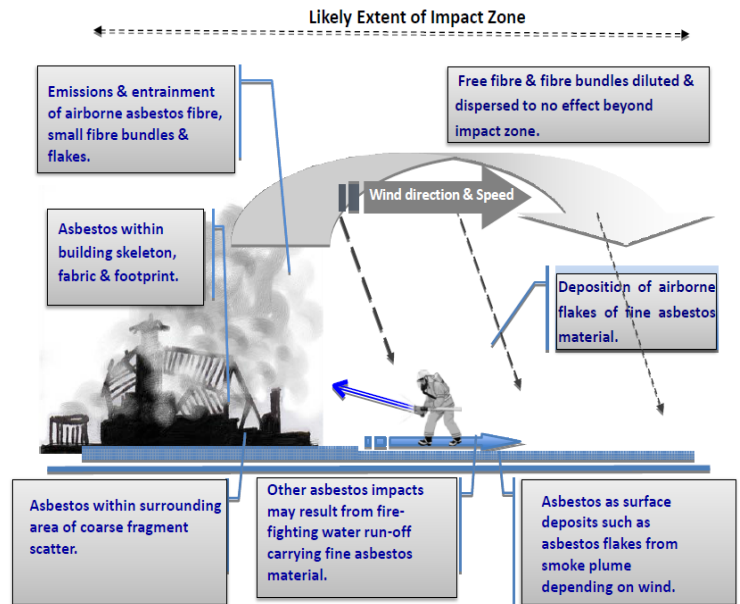
For asbestos cement sheets (10-15% asbestos), this damage often occurs as shattering from the explosive release of contained moisture into sheeting pieces and flakes as shown. The fire asbestos impact areas include;

- dispersed airborne free fibre and small fibre bundles;
- building skeleton and footprint;
- adjacent circular zone of coarse fragment scatter;
- areas of fine surface material (such as flakes) from smoke plume deposition (depending on wind); and
- sometimes, contamination from fire fighting water runoff carrying fine asbestos material.

Possible Asbestos Health Effects

The asbestos contamination of most concern is that which can generate tiny fibres able to penetrate deep into the lungs.

Inhalation of these tiny fibres in sufficient quantities can result in asbestos-related diseases such as the deadly mesothelioma.



Fortunately the likelihood of these diseases is very low and everyone has been exposed to small amounts of asbestos fibres in air during our lives without health effects.

Studies and air monitoring during and just after a fire show that the amounts of the tiny asbestos fibres are comparable to background levels and what the Department of Health considers as safe. This is due to limited initial fibre release as well as massive air dilution and dispersal.

However, as it is important to minimize any asbestos exposure, careful clean up any asbestos fragments is still necessary.¹ These asbestos materials are usually brittle or friable material and if disturbed can release the dangerous fibres.

¹ It is also important to be aware of other possible hazards of a fire site such as damaged structures, electrical wiring and residues of copper-chrome-arsenate (CCA) treated timber.

Management of Asbestos Impacts

Following a fire, emergency services and environmental and health agencies take interim measures to prevent disturbance of asbestos contamination. These include erecting temporary fencing if practical and cleaning of priority traffic areas. Evacuation of adjacent buildings due to asbestos contamination is only rarely necessary.

The following more thorough assessment and clean up of the asbestos contamination is usually the responsibility of the site owner. The Local Government Environmental Health Officer (LG EHO) is normally the relevant regulatory authority under the *Health (Asbestos) Regulations 1992*, and supervises the process. In some cases, such as large bushfires, the Western Australian Natural Disaster Relief and Recovery Arrangements may take charge of some or all of the clean up and work with the LG EHO in this regard.

It is important that the assessment and clean up is done in a systematic way by asbestos professionals, using the Department of Health's *Guidance Note on the Management of Fire Damaged Asbestos 2014* and the *Safe Work Australia Code of Practice - Safe Removal of Asbestos 2005*.

Specifically, the asbestos contamination normally must be cleaned up by an asbestos removalist with an unrestricted WorkSafe license and this should be by following a plan devised by and be under the guidance of an asbestos consultant.

In this way any asbestos fire contamination and associated public health risks will be fully addressed.



Key Contacts

After a fire, the key agencies or groups you may need to contact in regard to management of public health risks are the LG EHO, the Department of Health, and/or asbestos professionals.

Local Government Environmental Health Officer

The LG EHO will provide direction as to how the asbestos contamination needs to be managed by law. Contact your Local Government from the following directory and ask for the EHO:

[Department of Local Government and Communities - Local Government Directory](#)

Department of Health

The Department's Environmental Health Directorate can provide specialised technical and regulatory advice on asbestos fire contamination, if necessary, in addition to that provided by the LG EHO. The contact details are:

(08) 9388 4999 and <mailto:ehinfo@health.wa.gov.au>

Asbestos Professionals

Asbestos Consultants – In the case of artificial surface and/or limited soil contamination this should be an occupational hygienist or asbestos competent person. See <http://www.aioh.org.au/consultantsearch.aspx>

In the case of extensive soil contamination, e.g. a large bushfire, this should be an environmental consultant. See <http://www.aclca.org.au/wa-our-members>

A list of asbestos removalists with an unrestricted license may be found at: http://www.commerce.wa.gov.au/sites/default/files/atoms/files/unrestricted_asbestos_licence_0.pdf

Guidance Documents

DOH *Guidance Note on the Management of Fire Damaged Asbestos 2014*: http://www.public.health.wa.gov.au/3/1143/2/asbestos_and_public_health.pm

Safe Work Australia *Code of Practice – Safe Removal of Asbestos –2005*: <http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/cp2005saferemovalofasbestos2ndedition>