Management of Small-Scale Low-Risk Soil Asbestos Contamination

Purpose

This document provides guidance on the assessment and management of single residential blocks which have soil asbestos contamination resulting from poor demolition practices or dumping. It is intended to be primarily used by Local Government Environmental Health Officers (LG EHOs), in consultation as necessary with the Department of Health (DOH).

Background

Asbestos building products were widely used in Western Australia (WA) from the 1940s to the 1980s, and many of the buildings and structures involved are now being demolished for infill developments. If the demolition is not properly conducted, then asbestos debris will often remain on site or be dumped on other sites. This can pose a risk or community concern that LG EHOs are frequently called upon to resolve.

The main legislation in WA relating to contaminated sites is the *Contaminated Sites Act 2003* (CS Act), administered by the Department of Environment and Conservation (DEC). For asbestos contamination issues, DEC relies on advice from the DOH and its *Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia (DOH, 2009)*. LG EHOs and DOH may also make use of the *Health (Asbestos) Regulations 1992* to help regulate asbestos removals, including the disposal of asbestos spoil.

The full application of the legislation and the Guidelines, which can be expensive and protracted, is not warranted in certain low-risk situations where acceptable simpler regulatory measures may be sufficient. Soil asbestos contamination resulting from poor demolition practices or dumping on a single residential block are often low-risk situations where the following regulatory process is recommended. However, with DOH agreement, the approach may also be suitable for other low-risk applications such as for commercial sites or several or more residential blocks.

Simple Site Assessment and Management Process

This process is for asbestos-containing materials (ACM) where the asbestos is bound in a matrix such as cement (bonded asbestos), and there is little free fibre present. The ACM would mainly appear as fragments, pieces or sheets. Asbestos in these forms is not likely to release appreciable amounts of free asbestos fibre, which presents the main risk from asbestos through inhalation.

The general sequence of steps is to:

- halt potential contaminating or contamination disturbing activities at a site;

- identify the presence of asbestos;
- assess the extent of contamination and select a clean-up option;
- provide notice of what is required;
- monitor and validate the clean-up.

At various stages, it may be necessary to inform other agencies such as WorkSafe.

Contamination Prevention

Any incorrect handling or disturbance of ACM on a site should be halted as soon as possible by available regulatory means if necessary, possibly in conjunction with WorkSafe. The activity may be posing a real-time risk to adjacent properties or site personnel, or may be scattering and burying ACM which may pose a future risk.

Asbestos Identification

The LG EHO may be able to identify ACM based on experience, but confirmation is recommended by submitting representative ACM pieces for laboratory analysis. If in doubt, assume it is asbestos.

Site Assessment and Management Selection

The site assessment will primarily depend on a visual inspection. Other useful information includes: building license records; demolition applications; asbestos removal plans; asbestos disposal receipts; and often interviews with site personnel, the owner or neighbours. Important topics include: age and condition of building or structures; the likely amount of asbestos in them; the method of demolition and safeguards; and details of earth-disturbing activity.

The “walkover” should be systematic and preferably on a grid basis. For instance, a 4 m by 4 m area might be inspected, taking note of the total sheet area of ACM found. Small location flags may be helpful. It is then possible to determine the average ACM total sheet area per m^2 of surface, for each grid area. As an example, 3 x 1 cm^2, 1 x 6 cm^2 and 1 x 20 cm^2 ACM pieces found in that grid would equate to a total of 29 cm^2 divided by 16 (the grid area) which equals about 2 cm^2 of ACM per m^2.

If there is just a “hotspot” of contamination, e.g., many pieces of ACM in a localised area, then a smaller grid size may have to be used. If there are just a few large ACM pieces sitting cleanly on the surface, then just their managed removal would be adequate, without resorting to calculations.

Actions will normally depend on the estimated level of contamination per m^2 of surface as follows:

- ACM total sheet area < 10 cm^2 (e.g. 3 x 3 cm) and with little associated past soil disturbance – *very low risk* - **simply remove all visible ACM, including if practical after gently fine raking of wetted soil to 10 cm depth to expose ACM fragments**;

- ACM total sheet area > 10 cm^2, or ACM occurrences with significant soil disturbance, or buried asbestos fencing stumps – *low risk* - **consult DOH with the expectation of excavating the impacted and possibly all soil down to depth of likely ACM penetration.**
- **For larger quantities of ACM, the risk may be higher and the site may need to be reported to DEC under the CS Act.**

Reporting and Communication

The LG EHO should document the process (including photographs) and notify the owner in writing as to what is required. This may take the form of a notice issued pursuant of the *Health (Asbestos) Regulations 1992*.

Clean-up Management

The LG EHO or an independent auditor should observe the clean-up, check the final surface for contamination and inspect disposal documentation. If inadequate, then another remediation round or higher level of action may be necessary.

During any removal of asbestos soil contamination, the material should be handled carefully and management measures instituted to minimise the release of asbestos fibres, and thus protect site personnel and the public.

As a minimum, gloves and P1/P2 dust masks should be worn and ACM double wrapped in heavy plastic (0.2 mm thick). If soil is to be excavated, then the following additional measures are recommended: dust suppression methods such as spraying with a suitable wetting agent; securing the site and erecting warning signs; informing neighbours about activities; and covering transported impacted soil. All contaminated material must be disposed of at an approved landfill site.

If the responsible party is not willing to implement the appropriate actions then it may be necessary to report the site to the DEC under the CS Act and take other actions as deemed necessary, including managing any real or perceived risks in the meantime. Any report to the DEC should include details of the contamination, including location, cause, character and photographic evidence if possible and be on the Contaminated Site **Form 1** (Report of a Known or Suspected Contaminated Site), available at:

www.dec.wa.gov.au/contaminatedsites

Once reported to DEC, the site will be normally assessed within the statutory prescribed timeframe of 45 days and classified according to its contamination status. This will likely legally require the owner to investigate or remediate the site and a memorial will be placed on the Certificate of Title where necessary.

Contact Information

For information on asbestos-contaminated soil issues contact the Toxicology Branch on 9388 4984 or for asbestos demolition advice contact Applied Environmental Health Branch on 9388 4965**.**

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