

Asbestos Licensing Unit (ALU)
Asbestos Liaison Group (ALG)
ALG Memo 02/08

ALG memos are produced by the ALG to provide information and guidance to the asbestos industry and other interested stakeholders.

Date: April 2008

Subject: Demolition: dealing with buildings that contain asbestos

1 This note has been prepared in order to clarify the position with regard to the demolition of structures in which asbestos containing materials (ACMs) are located.

2 Background

2.1 The Control of Asbestos Regulations 2006 (CAR) removed lower risk work from the licensing regime, such as, work with textured decorative coatings (<http://www.hse.gov.uk/research/hsl/workenvn.htm>, report: HSL/06/19). However, the rest of CAR, its associated Approved Code of Practice (L143); The Construction, Design and Management Regulations 2007 (CDM) and The Health and Safety at Work Act 1974 (HSWA) are still relevant:

- Demolition (and other works liable to expose employees to asbestos fibres) shall not take place unless the employer has carried out an assessment to determine the presence of asbestos and its type and condition etc. (CAR 2006, Reg 5);
- Exposure to asbestos fibres must be prevented or controlled (CAR 2006, Regs 11 and 16);
- A plan of work for demolition should specify that the asbestos is removed prior to the work, so far as is reasonably practicable, unless removing it would cause greater risk than leaving it in place (CAR 2006, Reg 7(3));
- Information about the location of all ACMs must be provided by the client or CDM Coordinator at the tendering stage of the project (CDM 2007, ACoP L144, Appendix 2 and Regulation 4 of CAR 2006). This must include the results of the type 3 asbestos survey. Demolition must proceed with caution in areas that have not been accessed as part of the survey. Any ACMs found will need to be removed in accordance with CAR.
- All ACM work should be done in accordance with a job specific plan of work (method statement) resulting from a risk assessment (Regs 6 and 7 of CAR 2006).

3 Assessing the risks of ACM removal prior to demolition

3.1 It is envisaged that the majority of asbestos containing materials will continue to be removed prior to demolition. There may be some situations where demolition can be carried out without prior removal work (CAR 2006, Reg 3(2)). Guidance in ACoP L143 (paragraph 78) stipulates that where removal of non-licensable ACMs is time-consuming and resource intensive and only involves a **lower risk material** (such as textured decorative coatings containing asbestos), then removal prior to demolition may *not* be reasonably practicable.

This only applies to asbestos materials where the fibres are “firmly bonded in the matrix” (Regulation 3(2) and paragraphs 34 – 39 of ACoP L143 refer), such as textured decorative coatings (e.g. attached to a concrete substrate).

Such work will not require an HSE asbestos licence, but will still require adequate control measures to prevent or minimise exposure to or spread of asbestos.

3.2 When making a judgement about the reasonable practicability of ACM removal prior to demolition you must consider the following on a project by project basis:

- The time, cost and effort involved with conventional methods of asbestos removal balanced against the other health and safety risks created by these activities, such as, work at height, the structural integrity of the building, the manual handling of materials, exposure to noise, vibration and dust etc;
- The risks associated with leaving the asbestos product in-situ and any associated re-cycling of demolition rubble. A volume calculation of the building structure relative to the quantity of asbestos should be made to ensure that residual rubble will not exceed 0.1% w/w.

Examples of non-licensed materials that *should* normally be removed prior to demolition are provided in Appendix 1.

4 Specific control measures required where firmly bonded ACMs have not been removed

4.1 The techniques listed below have been shown to cause no measurable personal or area contamination during demolition. In all cases, the risk assessment should consider local factors and conditions including the nature of the local environment (proximity to types of premises — schools, housing etc), height of building and extent and amount of remaining textured decorative coating / asbestos product.

- Minimum disturbance, controlled demolition techniques should be employed, e.g. the use of mechanical plant with impact hammers (not pulverisers);
- Dust suppression must be applied during demolition and or crushing;
- Rubble crushers should be remotely loaded/operated (see Quarry Sheet 3 referenced in paragraph 5.5);
- Workers should be adequately trained to use the relevant techniques, equipment and RPE identified in the plan of work and risk assessment;
- Suitable RPE and PPE must be worn as set out in the plan of work.

4.2 Whilst appropriately controlled demolition work should not create significant levels of exposure, you should carry out airborne sampling to demonstrate that there has been no measurable spread of asbestos (i.e. that airborne levels are <0.01f/ml).

5 Explosive demolition

5.1 Explosive demolition of buildings containing firmly bonded ACMs may be an acceptable demolition technique where it reduces the overall risk for the project. Examples include: avoiding extensive work at height on tower blocks; buildings in an unsafe condition and where access is poor for working platforms or remote demolition plant. Pre and post work perimeter airborne monitoring is strongly recommended to demonstrate that there has been no significant spread of asbestos fibres.

6 Recycling of demolition rubble containing ACMs

6.1 Where it has not been reasonably practicable to remove firmly bonded asbestos containing materials, it is HSE's view that the remaining demolition rubble can be re-used without contravening Regulation 29 of CAR. Information about the content of ACMs in demolition rubble will have to be passed on to the buyer and the haulier.

6.2 The rubble produced by the demolition of a structure containing textured decorative coatings in-situ (original asbestos content usually between 1-4%) will now have an asbestos content very much less than 0.1%. In practice, such rubble will not be considered hazardous waste (called special waste in Scotland). The Environment Agency and the Scottish Environment Protection Agency have agreed that these waste materials can be re-cycled as hardcore etc, subject to the conditions of any waste management licence or mobile plant operator's licence that the Local Authority may issue for the process. Further information about general waste handling can be found on the following webpage: <http://www.hse.gov.uk/waste/index.htm>.

6.3 CAR will always apply to the general re-use of hardcore rubble / waste containing more than trace elements of asbestos regardless of whether it is considered to be 'hazardous waste' or not. You must take all reasonably practicable measures to prevent exposure and the spread of asbestos. Conventional dust suppression techniques (as required for controlling exposure to respirable silica dust) should be used when handling building rubble from such demolition activities.

6.4 Crushed rubble will contain an extremely small amount of firmly bonded ACMs and with appropriate controls in place, will not give rise to significant risk to employees or other persons when used for other developments. Guidance on the safe operation of mobile crushing plant is available via the following link: [Quarries - Information](http://www.hse.gov.uk/pubns/guidance/qv3.pdf) and <http://www.hse.gov.uk/pubns/guidance/qv3.pdf> . Conventional suppression techniques (water sprays) should be used to control dust levels during crushing.

7 Disposal of rubble

7.1 You should ensure that each consignment of residual waste does not exceed the 0.1% w/w threshold for asbestos. Hot-spots of concentrated asbestos debris may need to be removed by hand. Precautions for this work must be included in the asbestos plan of work for the project. You may require permission from your Local Authority to carry out this waste sorting process.

7.2 Any rubble or other waste containing more than 0.1% asbestos should be disposed of as hazardous (special) waste at an EA/SEPA licensed landfill site. This includes rubble etc from agricultural buildings.

8 Welfare facilities

8.1 Construction sheet 18 describes what welfare facilities should be provided on any construction (includes demolition) site. This type of work will produce general dust that may include silica. Showers must be provided to allow workers to remove such dusts. Asbestos specific hygiene facilities should only be required for licensed asbestos work.

APPENDIX 1

EXAMPLES OF NON-LICENSED ACMS* THAT SHOULD NORMALLY BE REMOVED PRIOR TO DEMOLITION OR MAJOR REFURBISHMENT WORK

The following examples are for illustration only: planning of demolition work must be based on a suitable and sufficient risk assessment of each particular case.

1. *Textured decorative coating on (non-asbestos) board.*
2. *Asbestos cement (AC) roof sheets, guttering and cladding.*

It is generally reasonably practicable to remove sheets whole, prior to demolition (using appropriate working platforms etc.). However, in some circumstances, remote demolition (using water sprays) may be the safest option for AC buildings, leaving the AC sheets in place. Examples include: structurally unsound buildings; to avoid work at height risks or where there is poor access for the use of working platforms. Dust suppression must be used and perimeter monitoring is recommended. Further guidance is available in HSG189/2.

3. *Bitumen floor tiles containing asbestos.*

It should be reasonably practicable to lift small areas of tiles (e.g. <20 m²) prior to demolition. For larger surface areas, or for tiles that are more difficult to reach or remove, controlled demolition may be appropriate.

4. *Items listed in paragraphs 34-35 of ACoP L143: 'Work with materials containing asbestos'*

* All licensed ACMs should be removed.