# SAFETY ALERT

**RELEASE OF ASBESTOS FIBRES IN CLASP BUILDINGS. Number: SA 02/07**

<table>
<thead>
<tr>
<th>ES&amp;P Sponsor</th>
<th>R A Cawthorne</th>
<th>Date of issue</th>
<th>02 July 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel:</td>
<td>94421 2077/ 0121 311 2077</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contact if different from ES&P Sponsor:**

Who Should Read this: CEstOs, Top Level Budget Holders, MOD Project Managers, Commanding Officers/Heads of Establishment, Defence Estates (DE) Deputy Directors (Estates), DE Advisors, DE Facility Managers and Maintenance Management Organisations, who are advised to draw it to the attention of the Works Services Teams.

<table>
<thead>
<tr>
<th>When it takes effect:</th>
<th>Immediately</th>
<th>When it is due to expire:</th>
<th>02 July 2008</th>
</tr>
</thead>
</table>

The aim of this Safety Alert is to draw to the attention of occupiers and maintenance organisations of the potential for unacceptable levels of asbestos fibres to be released into the atmosphere and the need to undertake visual inspections as identified in this document.
1. Document synopsis.

This Safety Alert advises all relevant parties of an incident which occurred when a significant amount of asbestos fibres were released whilst refurbishment work was being carried out. The buildings involved were of CLASP Mk 4 & 4B design manufactured by Scape System Build Limited.

Scape System Build Limited has notified DE that MOD has in the past procured a number of these buildings. As a result of an incident in a school and an investigation of other buildings of the same design, the manufacturers of these buildings have in consultation with the HSE, issued the attached guidance/recommendations.

We have been advised that in certain conditions the risk of release of asbestos fibres above the control limit is considered to be significant and therefore requires urgent attention.

2. Introduction:

THE CONTENTS OF THIS ALERT WILL SECURE COMPLIANCE WITH THE HEALTH & SAFETY AT WORK ETC ACT 1974 AND ITS SUBORDINATE REGULATIONS.

The appropriate MOD officer shall arrange for the RPC/ Maintenance Management Organisation (MMO) contractor to carry out all actions in accordance with this Alert.

Any work required as a result of this Alert must be carried out in accordance with Control of Asbestos Regulations

On MOD Establishments occupied by United States Visiting Forces (USVF) responsibility is jointly held by USVF and DE (USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Alert. Where this Alert contains procedures which differ significantly from USVF practice DE (USF) code of practice will be issued.

3. Requirement:

ACTION ADDRESSEES ARE TO ENSURE THAT THE REQUIREMENTS OF THIS ALERT ARE NOTIFIED IMMEDIATELY TO MMOs.

This Alert applies to CLASP Mk 2, 3, 3b, 4, 4b, and 5 buildings

Scape System Build Ltd in consultation with the HSE, have recommend that the following actions be taken:

- Carry out a visual inspection of following items to ensure that there are no gaps in the elements of the internal lining to the external wall, pay particular attention to column casings and blind boxes.

- Priority for the visual inspection be given to:
  - Buildings constructed prior to 1974
  - Where refurbishment works have disturbed the column casings and the internal lining to the external wall.
  - Where ceilings have been accessed and tiles not replaced correctly
• Ensure that best practice is followed in the applications of the Control of Asbestos at Work Regulations and in the selection of contractors and consultants for the carrying out the asbestos removal works. (Further information can be obtained from www.hse.gov.uk)

• If gaps are found it is recommended that they be sealed with a silicone sealant.

4. Background

The structures are steel framed buildings, the steelwork being clad with asbestos insulation board (AIB), possibly for fire protection. The AIB itself is encapsulated with metal cladding, which in some cases is fixed to the AIB using screws. Alternatively the AIB is fixed to the cladding rather than the steel beams. There are gaps in the metal cladding of various dimensions. In some cases the cladding is very loose. The AIB contains amosite.

It has been found that if the cladding is struck, asbestos fibre can escape into the room. The degree of escape of fibre varies. In some cases levels in the general atmosphere of the room are very low. But in others levels have been found that exceed the control limit. The striking was three or four sudden blows and is the kind of disturbance that is foreseeable in a working environment. Disturbance is also foreseeable when doors are slammed where the doors are adjacent to damaged AIB / loose cladding or where possible wind loading on replacement windows which have been fixed by screws directly into the steel columns which are clad with AIB.

Further investigations carried out by the HSE showed that asbestos insulating board fitted during the original construction had been disturbed and fibres been released into the building through gaps in column casings and internal lining to the external wall. The asbestos had been disturbed as the result of a number of events:

• During the construction waste material, including asbestos insulation board and asbestos cement sheet, had been discarded within the external wall cavities and roof space.

• Works, mainly the fitting of cables had been undertaken post the original construction. windows had been replaced fixing the new by means which required the disturbance of the column casings and other elements. The window replacement was not carried out using a CLASP/Scape nominated installer.

• Debris from previous asbestos removal works.

Further information, including contact details for CLASP buildings are contained in the document attached at Annex A.
FORMAL NOTICE

Release of Asbestos Fibres in CLASP Buildings

Distribution:
CLASP Building Owners
October 2006
During August 2006 an incident occurred at a property in Rhondda Cynon Taff where during works on a school asbestos fibres were released above acceptable levels. As a result a number of schools were closed and remedial work undertaken. The schools and community buildings were of CLASP mark 4 and 4B design.

Further investigations carried out by the Council and the HSE showed that asbestos insulating board fitted during the original construction had been disturbed and fibres been released into the building through gaps in column casings and internal lining to the external wall. The asbestos had been disturbed as a result of a number of events:

- During the construction waste material, including asbestos insulation board and asbestos cement sheet, had been discarded within the external wall cavities and roof space.
- Works, mainly the fitting of cables, had been undertaken post the original construction.
- Windows had been replaced fixing the new by means which required the disturbance of the column casings and other elements. The window replacement was not carried out using a CLASP/Scape nominated installer.
- Debris from previous asbestos removal works.

What is not known from this event is whether fibres would have been released had the column casings not been removed and refitted and the asbestos insulation board had not been disturbed.

Asbestos fibres once settled as dust require a mechanical means to disturb them. They do not become airborne by means of a draught of air. The HSE recommend that when asbestos can be adequately encapsulated it is not removed.

**Recommended Actions**

Scape, in consultation with the HSE, recommend the following actions:

- Ensure that best practice is followed in the applications of the Control of Asbestos at Work Regulations 2002 and in the selection of contractors and consultants for the carrying out the asbestos removal works. (Further information can be obtained from www.hse.gov.uk)
- Carry out a visual inspection of following items to ensure that there are no gaps in the elements of the internal lining to the external wall, pay particular attention to column casings and blind boxes.
- Priority for the visual inspection be given to:
  - Buildings constructed prior to 1974
  - Where refurbishment works have disturbed the column casings and the internal lining to the external wall
  - Where ceilings have been accessed and tiles not replaced correctly

To enable owners to gauge the implications of the RCT incident for their organisation they may chose to sample survey buildings.

If gaps are found they need to be sealed with a silicone seal.
TYPICAL DETAILS

BLIND BOX – MARK 4

COLUMN CASING – MARK 4
COLUMN CASING AT WINDOWS – MARK 4

BLIND BOX – MARK 4b
Further Information

For further information contact Paul Windle at Scape System Build Ltd
E: PaulW@scapebuild.co.uk
T: 0115 958 3200

The Scape Asbestos Awareness Handbook can be downloaded from http://www.scapebuild.co.uk/NetBuildPro/process/20/BuildingSystems.html. The Handbook is not a substitute for the correct performance of the procedures and surveys set out in the HSE Regulations. It does provide guidance as to where asbestos was typically specified in the CLASP standard details.

HSE Guidance note

Attached is a note prepared by the HSE in Wales and distributed to the Welsh Assembly, Scottish Executive and the DfES on 11 October 2006.

For clarification:

- References in the HSE document to cladding are metal column casings.
- In standard details the Asbestos Insulation Board was bonded to column casing. It was bonded direct to the column in some instances.
- In the case of the Welsh schools where the incident took place the column casings were loose, but they had been removed and refitted.

Scape

Scape System Build Limited is a Local Authority Controlled Company. It commenced business in April 2006 and is the trading company for the CLASP Consortium. For more detail consult the Scape web site www.scapebuild.co.uk and the CLASP web site www.clasp.gov.uk.
DRAFT FOR DISCUSSION

POTENTIAL FOR ASBESTOS FIBRE RELEASE IN CLASP BUILDINGS

1 A Local Authority (LA) in Wales have discovered potential for exposure to asbestos in some of their "CLASP" constructed schools. CLASP is the Consortium of Local Authorities Special Programme.

2 Mark 4 and 4b CLASP buildings were identified as a cause for concern regarding asbestos fibre release in foreseeable circumstances. However, this should not exclude other types of CLASP buildings e.g. asbestos material was also used in the construction of Mark 2, 3, 3b, 4, 4b and 5 buildings.

3 The schools are steel framed buildings, the steelwork being clad with asbestos insulation board (AIB), possibly for fire protection. The AIB itself is encapsulated with metal cladding, which in some cases is fixed to the AIB using screws. In some cases the AIB is fixed to the cladding rather than the steel beams. There are gaps in the metal cladding of various dimensions. In some cases the cladding is very loose. The AIB contains amosite.

4 It has been found that if the cladding is struck, asbestos fibre can escape into the room. The degree of escape of fibre varies. In some cases levels in the general atmosphere of the room are very low. But in others levels have been found that exceed the control limit. The striking was three or four sudden blows and is the kind of disturbance that is foreseeable in a school environment. Disturbance is also foreseeable when doors are slammed where the doors are adjacent to damaged AIB / loose cladding or where possible wind loading on replacement windows which have been fixed by screws directly into the steel columns which are clad with AIB. HSE sampling has confirmed sampling results found by independent Council funded sampling.

5 The disturbance was carried out under controlled conditions in a tented environment in which the negative pressure was switched off for the duration of the sampling. Personal samplers were worn during testing. It is understood levels were below clearance levels. So this provides some reassurance that during 'normal' conditions when the cladding has not been struck levels are not significant.

6 The standard of cleanup after construction at the schools visited was poor with off cuts of AIB being left in ceiling voids etc. The condition of cladding has deteriorated over the years and sockets and other fixtures have in some cases been screwed through the metal cladding and probably into the AIB. Window replacement was also carried out to a poor standard with frames screwed into the asbestos. All of these are likely to be 'risk factors'.

7 The mechanism of release is not clear. But in the worst cases it may be associated with the screws moving in the AIB abrading it, the striking of the cladding acting like a 'bellows' to disperse fibre. A number of factors are likely to be relevant to the degree of fibre release including damage to the AIB, overall maintenance of the building, gaps in cladding etc. HSE specialists are currently looking into this issue.
8 During construction it also seems that off cuts of AIB and debris have in some cases been swept into the gap between the wall and plasterboard stud partitioning or wall cladding. Skirting boards then sealed this debris in. When the plasterboard was struck fibre was again released through the skirting board gaps. Not all contractors will have been so cavalier in their approach so this issue may be limited in scope. Examination of another CLASP school of similar design has indicated a much better standard of construction – and a much better standard of window replacement. Release of fibre from struck cladding in this school has not been quantified but is likely to be much lower.

9 There are many thousands of buildings constructed under the ‘CLASP’ scheme. Of these a number will be constructed using this type of steel frame with AIB / metal cladding. The link below is to the CLASP/SCAPE website. SCAPE are now responsible for current buildings and have identified CLASP buildings constructed in the way described. A list is attached. The problem will be UK wide (maybe Europe wide). The number of CLASP schools varies hugely with some councils having dozens and others apparently none.

10 The Local Authority in Wales took the step of sealing gaps in the cladding using silicone sealant, expandable foam and other similar sealants. Sampling has confirmed that sealing using this method has been effective in preventing significant release of asbestos fibres.

11 SCAPE/CLASP will also be sending out a briefing note to all CLASP building owners.

http://www.clasp.gov.uk/

**ACTION REQUIRED**

12 As a priority you should identify the Mark 4 and 4b CLASP buildings under your control for attention. As described above, sealing gaps in the cladding using silicone sealant, expandable foam and other similar sealants has been found to be effective in preventing significant escape of fibre to levels below the clearance level. Initially this sealing/encapsulation work should be carried out below ceiling level. The work should be undertaken as a priority to mitigate any potential asbestos fibre release. Following this, monitoring for fibre release should be undertaken as reassurance.

13 Essentially, this is a duty under the Control of Asbestos at Work Regulations 2002, in that duty holders have responsibilities regarding the duty to manage asbestos which not only to requires them to assess whether asbestos is present but also to determine the risk and prepare and implement a plan for managing the risks which must be reviewed at regular intervals. There is more guidance available on HSE’s web site at http://www.hse.gov.uk/asbestos/index.htm.
2. **TRAINING**

Suitable induction training in relation to asbestos awareness should be provided to those managing this work and to all employees undertaking the work to ensure that they are competent to do the job safely. The training should include how to wear Respiratory protective equipment (RPE), and inform staff what asbestos is (the types) and what the risks and health effects are from exposure to asbestos.

**PERSONAL PROTECTIVE EQUIPMENT**

All employees involved in supervising or handling asbestos waste should be provided with suitable and appropriate PPE as a precaution only. Suitable PPE would include:

- Disposable overalls (type 5) fitted with a hood.
- A suitable particulate respirator e.g. a disposable FFP 3 mask.
- Cover shoes or boots without laces e.g. (laced boots can be difficult to decontaminate).
- All PPE should be inspected before use, and any defects reported to the relevant supervisor.

When putting on PPE remember to put the facemask on under the hood of the asbestos suit and not over the hood.