Asbestos Licensing Unit (ALU)
Asbestos Liaison Group (ALG)
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ALG memos are produced by the ALG to provide information and guidance to the asbestos industry and other interested stakeholders.

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Subject: **The Removal of External AIB Soffits**

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1. INTRODUCTION

1.1 This document has been prepared by HSE in consultation with several other organisations (see acknowledgements) to provide practical guidance and advice on the removal of external asbestos insulating board (AIB) soffits. The guidance is specifically designed for external AIB soffits (see Box 1) and does not apply to any other internal or external AIB product. The guidance also does not cover asbestos cement (AC) soffits as there are different regulatory requirements and some differences in procedures. Guidance on removal of AC soffits in domestic premises has already been published by the Glass and Glazing Federation in conjunction with HSE (Reference 1).

1.2 The document gives practical advice on the work practices, procedures and precautions, and controls that should be employed when external AIB soffits are removed. It is particularly relevant to work on domestic and commercial properties but it can be used for work on other property types. The document is designed to assist licensed asbestos contractors in their compliance with the requirements of the Control of Asbestos Regulations 2012 (CAR 2012) (Reference 2). The guidance will also be useful to "Home Improvement Companies" (HICs) and other organisations who engage the licensed asbestos contractors and/or who make decisions on whether work is licensable or not.

1.3 Soffit boards are building components which are usually located under the edge of the roof of a building (see Figure 1). They are attached to roof timber and enclosed by the fascia board. They can be nailed, screwed or inserted into a groove. Soffit boards can be found in many property types including domestic, municipal, educational, commercial and industrial. Soffits may also be "shared" between properties eg in "semi-detached" property types.

Building lay-out, design, dimensions and size can vary. Soffit dimensions (ie length, breadth and depth) can also be variable. Soffit size can event vary within individual properties (eg wider over a porch or entrance and narrower over other areas). Typical soffit dimensions on a domestic property can range up to 0.4m wide, 2.4m long and 0.01m thickness/depth. Soffits in other property types are more variable in width and thickness and can be up to 0.5m wide and 0.02m thick.

1.4 The exact proportion of properties which contain asbestos soffits is not certain but historical HIC data suggests that some 40% of soffits contain asbestos with around 15% made from AIB and 25% from AC. Due to differences in the hazard potential between AIB and AC soffits (see Box 1), there are certain regulatory restrictions on the type of organisation which can work on or remove the respective soffit types. Work with AIB materials (including soffits) (but with some limited exceptions as defined by Regulation 3(2) of CAR 2012) should be carried out by contractors licensed by HSE to carry out work with asbestos. Removal of AC products (including AC soffits) can be carried out by non-licensed competent contractors who have the necessary asbestos training and skills. Such organisations will include HIC or Local Authorities. Licensed contractors may also perform AC soffit removal using the procedures set out in Reference 1 and the work would normally be exempt from notification under licensing. (Removal of AC soffits is also likely to be "non-notifiable" non-licensed work under CAR 2012 ie exempt from notification). Identification of the type of asbestos will be a key starting point for soffit work. It is discussed in more detail in Section 2.

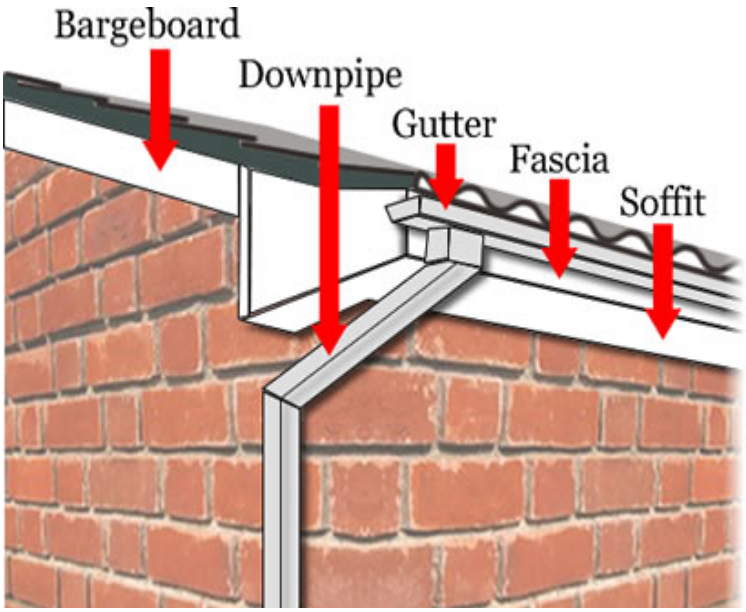

Figure 1: Location of Soffit

Box 1: Descriptions of AIB and AC soffits

AIB and AC are difference types of asbestos materials. AIB is a higher hazard asbestos material. It has a relatively high asbestos content (usually 15-40%) and normally contains amosite or a mixture of amosite and chrysotile asbestos (although crocidolite can be present in some pre-1985 products). AIB soffits have the potential to generate high fibre levels (eg up to 20f/ml) when broken or cut in poor control situations.

In contrast, AC usually contains between 10-15% chrysotile asbestos. AC is harder material than AIB and the asbestos fibres are more firmly held within the cement matrix. The potential for AC release fibres is much less than AIB and, as such, is considered a lower hazard asbestos material.

Note however that all three asbestos types (crocidolite, amosite and chrysotile) are Category 1 human carcinogens and all require rigorous control.

1.5 This soffit guidance is specific to external AIB soffits as the conditions involved in external removal are quite different from most internal situations where AIB is removed. As explained further in the guidance, the work in some instances may be performed without a full negative pressure enclosure and without the full 4-stage clearance process (ie no air sampling). These deviations from the "normal" internal control requirements and procedures for AIB arise from the specific nature and circumstances of external product removal and are only applicable to this type of external AIB soffit work.

1.6 Soffit removal may be carried out for various reasons including home improvement, renovation, repair and maintenance or pre-demolition removal. Therefore a range of clients could be involved in seeking to have soffit work carried out including domestic and professional (eg HIC, Principal Construction Contractor, Demolition Contractor). Some of these clients have legal responsibilities to provide information on the presence and type of asbestos. However, irrespective of the nature of the client and the extent and quality of the information available, it will be the responsibility of the licensed contractor to ensure that all the relevant risks are addressed in the risk assessment and an adequate plan of work (POW) is prepared.

1.7 AIB soffit removal work should involve the normal inspection and planning procedures associated with AIB work. The licensed contractor should endeavour to visit the site and assess the site conditions independently as these may be variable and challenging (eg height, access and obstructions) and involve the need for other equipment (eg suitable access equipment) and specialist sub-contractors (eg scaffolders). There may be some exceptions to site visits particularly in the domestic sector (as properties and conditions tend to be more similar). In these situations licensed contractors are often engaged by HICs. The HICs should have robust systems in place to ensure that the necessary information is collected and supplied to the licensed contractors to allow the work to be planned and a POW prepared without a site visit. More details of this are set out in paragraphs 3.2-3.3.

2. IDENTIFICATION OF ASBESTOS TYPE

2.1 The initial starting point for the work will be to establish the type of asbestos involved. There is a legal requirement for non-domestic clients, principal

contractors and employers who work with asbestos to identify the presence of asbestos. The asbestos will usually be sampled by a surveyor and analysed by a UKAS accredited organisation (as required by CAR 2012). In some cases it may be possible for an experienced surveyor to visually identify the asbestos type. However this identification method should not be the norm and clearly can be unreliable. If there is any doubt the material should be presumed to be AIB or analysed to confirm the asbestos type. The surveyor must inspect the soffit around the whole of the premises. Where variations in soffit material are identified, samples of the different materials should be taken. Where the soffit is shown to be non-asbestos or AC, it will not be necessary for a licensed contractor to carry out the removal work. Where an AIB soffit is confirmed or presumed, then a licensed contractor should undertake the work.

3. RISK ASSESSMENT

3.1 The licensed contractor should carry out a suitable and sufficient Risk Assessment and prepare a site specific Method Statement/Plan of Work (POW) describing the work methods and control arrangements. Details on this process are set out in the "Asbestos, The Licensed Contractor's Guide", HSG247 (Reference 3). The risk assessment should take account of the circumstances which exist in external soffit work. In particular it should take account of the design and lay-out of the premises, the area surrounding the building (eg available space, nature of ground (flat, uneven), presence of obstructions etc), and access and height issues. The range of matters to be considered in the risk assessment are listed in Table 1.

Table 1 – Items to be considered in the risk assessment

- The size, shape, dimensions and condition of the soffit.
- How the soffit is fixed (eg nailed, screwed, inserted in groove).
- Any items attached to the soffit such as alarm systems, cables, fittings, etc.
- If the soffit is fixed to other items (eg top of windows) which may have implications for how the work is carried out.
- Any points of ingress which may need to be sealed.
- The nature of the property eg multi-storey, terraced or semi-detached and if the soffit will be to be cut.
- Access arrangements eg for uneven of sloping ground, or any obstructions eg garages or conservatories, or access to the rear, garden items including statues/ vegetation, etc.
- The location of the decontamination unit.
- The location of the airlock for partial enclosures.
- Location of drains.
- The need for water and electricity.
- Any risks identified to the occupier or neighbours (presence or children/schools re segregation issues eg barriers or tape).
- Other matters eg if fascia board is to be removed, dealing with attached gutters, potential site clearance problems.
- The need for a licensed scaffolder.
- The need for a more robust/stronger enclosure (for adverse weather).

3.2 There may be some circumstances where a POW is prepared on the basis of information provided by the client (eg a HIC) and where there is no initial site visit by the licensed contractor. In these situations the Method Statement is prepared from information supplied by the HIC from their initial survey of the site. The information supplied (often referred to as a "Survey Pack" must contain all the relevant information in order for the license4d contractor to make the thorough preliminary Risk Assessment. Details of what information should be supplied are given in Table 1. In addition, plans or sketches and photographs of the property and surrounding area should be supplied. However, as responsibility for a suitable and sufficient Risk Assessment lies with the licensed contractor, further checks will be required by the licensed contractor to complete or validate the preliminary Risk Assessment on attendance at the site. There should be sufficient time to carry out these checks on the site before the work starts.

3.3 The checks should be undertaken by a competent person with management authority. The checks should include a visual inspection of the property and surrounding area and particular attention should be paid to the condition of asbestos and to access and height issues. If necessary, the Risk Assessment and Method Statement should be amended to take account of any new or different information obtained in the site inspection. The work should not start if tools or equipment are inappropriate or unsuitable for the job. If no "Survey Pack" is available or the pack is insufficient, then the licensed contractor must make arrangements to ensure that an adequate Risk Assessment is prepared before work starts and that the appropriate controls and procedures are employed. Regular work of this nature may lend itself to the production of generic Risk Assessments. While these documents may be a useful starting point for Method Statements, the Method Statements must identify and address site specific issues including other health and safety risks.

4. SITE SET-UP AND PREPARATION

4.1 The Decontamination Unit (DCU) must be set up and operational prior to work starting for both full and partial enclosures (enclosure types are explained in Section 6). While it is likely that water and power will normally be available, there must be arrangements for situations where they are not. Therefore "self-contained" units with integral power and water tanks should be employed as necessary. Under no circumstances should work commence without a fully operational DCU. The Unit should be located as close to the work site as possible. Where the work site consists of several premises in relatively close proximity (eg domestic properties in an estate), the unit may be able to be moved close to individual premises as the work progresses. Otherwise the unit should be centrally located.

4.2 The work area should be established. The area will be the designated asbestos area and respirator zone (as required under CAR 2012). Where a full enclosure (see paragraphs 6.1 – 6.3 and Box 4) is employed, the enclosure will form the work area and access will be regulated as normal through the airlock system. Where a partial enclosure (see paragraphs 6.4 – 6.5 and Box 5) is involved, the extent of the work area will depend on several factors including the nature of the property, the available space and any obstructions. The aim should be to utilise an area extending from the building. For partial enclosures, a 3-stage airlock should be built which will allow regulated access to the work area. The airlock may be able to be attached to the access equipment (eg scaffolding or tower) otherwise it

should be free-standing and secure. The airlock will allow normal entry and exit procedures to and from the work area (see Box 5 and Table 5).

4.3 The site should be assessed to determine the potential for spread of asbestos material into the host or nearby premises. Precautions should be taken to prevent the spread of dust and debris into these premises as necessary. All windows, doors and other openings should be closed and/or sealed. All sources of air intake including fans, vents and airbricks in the vicinity should be protected or sealed off (see Box 2). Window and door edges should be examined for gaps and sealed up as necessary. The area around the soffit should be checked for spaces or gaps into the loft or void and these should be sealed where it can be achieved. It is not expected that roof spaces will be examined routinely. However where the roof voids of loft areas have to be entered arrangements will have to be made for safe access. Arrangements should also be made for dealing with situations where there are open windows or other vents in adjoining or nearby premises and the occupant is out eg these openings may have to be sealed.

Box 2: Ventilation Hazard

The implications of sealing off vents MUST be brought to the occupier's attention through both written information and verbally. Gas appliances will not be able to be used in these circumstances. If gas appliances cannot be switched off, other arrangements will have to be made. Arrangements should be made to ensure that all vents are unblocked once work has been completed.

4.4 Building occupants should be instructed not to enter the work area. There may have to be further discussion and action if children could be present. Pets should also be restrained. The building occupant should be given information in writing (eg an explanatory leaflet) explaining why the precautions are necessary and the steps being taken to eliminate and reduce any risks. It may also be appropriate to inform adjacent neighbours and other parties who may be affected by the works. The work area and immediate surrounding area should be inspected (ie pre-inspection) to identify any conditions which may make clearance or clearance confirmation more difficult eg suspect dust or debris on the ground or in the garden; other nearby areas or items which would be difficult to decontaminate and therefore need covering (eg soil, statues). These matters should be resolved prior to work starting. PPE and RPE should be worn where picking up suspect asbestos materials.

5. ACCESS, EGRESS AND A SAFE PLACE OF WORK

5.1 A suitable means of access and a safe place of work must be provided. The type of access will depend on several factors including the height of the building (eg single or multi-storey), the nature and profile of the surrounding ground (eg flat/sloping) and the presence of existing services, features and obstructions. The type of access equipment will also depend on the type of enclosure used. Continuous scaffolding may be suitable for full enclosures, or light-weight scaffolding towers or other mobile access equipment such as scissors lifts or some MEWPs may be possible where partial enclosures are involved (see Box 3). In some cases a licensed scaffolder may be necessary

(see ALG memos at http://www.hse.gov.uk/aboutus/meetings/committees/alg/memos_issued.htm). The scaffold must be constructed by a competent scaffolding contractor in compliance with "The Work at Height Regulations 2005" (Reference 4). This contractor will need to be licensed if there is the potential for asbestos to be disturbed during construction of scaffolding. In addition, as the removal of soffits will involve handling large panels, access and egress to the working platform should be by a safe method eg stairs. If ladders are used, alternative transfer arrangements from the platform will be necessary as large or heavy items should not be carried down vertical ladders.

Box 3: "Suitable Access Equipment"

Suitable access equipment can include the following:

- Scaffolding
- Approved priority temporarily access equipment (eg "Easidec")
- Mobile towers (850mm)
- Mobile access towers (750mm)
- Ladders (*in some circumstances)

6. ENCLOSURE AND CONTROLS

Full Enclosure

6.1 A full enclosure for soffit work is described in Box 4. Full enclosures should be used when it is reasonably practicable to do so. Full enclosures are to be expected with single storey or low-level buildings and they may also be reasonably practicable with some multi-level premises. Full enclosures will be expected where the soffit is in poor condition (eg the surface has eroded or deteriorated of the board is liable to fall apart so that there is a high potential for asbestos spread) or where the removal will be difficult, awkward or complex (again there is a high potential for asbestos spread). In addition full enclosures may also be specified by particular clients eg for schools or other public buildings (examples of full enclosures are shown in photographs 1-2).

6.2 A full enclosure will not be expected where it is not "reasonably practicable" ie where the construction complexity, time and resources are high relative to the duration and risk involved in the work (eg a full enclosure would not be expected where the work involves straight forward removal of a soffit in good condition from a two or three-storey domestic property).

6.3 These external enclosures will need to be sufficiently robust to deal with potential adverse weather conditions. The matter should be considered as part of the risk assessment but should be kept under review. The enclosure should be sufficiently strong eg constructed using a scaffolding framework. Heavy duty polythene sheeting or wooden board lined with 1000 gauge polythene may also have to be used for construction of the walls. The enclosures should be fitted with filtered air extraction equipment (NPUs) (exhausted away from any buildings) and airlocks/baglocks as normal. The enclosure should be sealed as far as reasonably practicable to the building

roof (near to the eaves or at the gutter (see photograph 4) and to the walls as appropriate (see Box 4)). Full details on the construction and specification of full enclosures is contained in "Asbestos, The Licensed Contractor's Guide", HSG247, Chapter 6 (Reference 3).

Partial Exposure

6.4 A "partial enclosure" for soffit work is described in Box 5. A partial enclosure can be used in situations where full enclosure of the work area will not be reasonably practicable ie where the construction complexity, time and resources are high relative to the duration and risk involved in the work (see paragraph 282 I "Work with materials containing asbestos", L143 (Reference 2)). A partial enclosure is likely to be justifiable for domestic two or three-storey premises where the work is quite short term (a few hours), relatively straight forward and is likely to result in low risk (ie soffit will be removed in whole or large sections with minimum breakage).

6.5 The implications of the use of a partial enclosure will need to be fully recognised. A partial enclosure will not form an effective enclosure to airborne spread. Therefore it should also be borne in mind that substantial fibre release is possible where work practices are poor and/or uncontrolled. For example breakage or drilling or cutting could cause fibre concentrations up to 20f/ml (Reference 3). Consequently, in the absence of a full enclosure, it is particularly important that good work practices and effective controls are employed and that disturbance is kept to an absolute minimum. Also personnel movement in and out of the work area will have to be properly regulated. Therefore a partial enclosure should be used in conjunction with a standard 3-stage airlock (see Box 5) to regulate and control operator access in a similar manner to a full enclosure. "Enclosure requirements" for situations where a partial enclosure is used are set out in Table 2.

Box 4: "Full Enclosure":

A "full enclosure" is an "enclosure" which is constructed at the side of the building and encloses the soffit work area. It will extend to the eaves or gutter level (or slightly beyond on the roof). It should be attached to the building (see Photo 4). Its purpose is to enclose the soffit. The enclosure is only necessary at the "upper level" of the building although it will need to be sited on scaffolding for multi-storey buildings. The enclosure should be constructed from 1000 gauge polythene. The platform should be wide enough to allow safe work (probably about 2 metres). Sheeting should be used on the inner wall to protect the building wall. It should be attached just below the soffit (ie at eaves level) and extend to the enclosure floor. The enclosure should be fitted with a 3-stage airlock and baglock and be placed under negative pressure. The enclosure should be smoke tested as normal (see paragraphs 6.1-6.2). An example of full enclosures are shown in Photos 1 and 2.

It is recognised that the "negative pressure" in the enclosure will be much reduced when the first soffit section is removed. Therefore to ensure that the inward airflow towards the NPU is maximised (and air movement into the ceiling void or loft is minimised), a higher air change rate in this type of enclosure should be used. An air change rate of at least 20 per hour should be employed.

Box 5: "Partial Enclosure":

A "partial enclosure" is an "enclosure" which consists of 4 sides and a base which is built next to the wall of the building and just below the soffit. It is constructed on a working platform which may be conventional scaffolding or other suitable access equipment (see Box 3). The platform should be wide enough to allow safe work (probably about 2 metres). The partial enclosure is designed to capture and contain all falling debris and fragments during the soffit removal. The platform should be fitted with impervious sheeting (eg 1000 gauge polythene) on the floor and all external sides up to 1-1.5 metres. Sheeting on the inner side (ie next to the building) should be up to about one metre (ie barrier height). The platform should contain supplementary flooring to avoid a slip hazard. Further sheeting should be used to protect the building wall. It should be attached just below the soffit (ie at eaves level) and extend into the platform. An example of a partial enclosure is shown in Photo 3.

A standard size 3-stage airlock (ie 1x1x2m) should be employed a ground level with a partial enclosure and be used as the means of entry and exit to the work area. Where possible, the airlock should be attached to the scaffolding or tower for securing purposes. An example of an airlock attached to scaffolding is shown in Photo 2. Otherwise it should be free-standing. It should be secured as necessary. More details are given in Table 2.

Photo 1: Examples of "full" enclosures around domestic properties.

Photo 2: Example of "full" enclosure around a school building.
Note: a similar 3-stage airlock can be attached to scaffolding where partial enclosures are used.

Photo 3: Example of “partial” enclosure at a domestic property.

Photo 4: Examples of sealing of full enclosure around gutter and pipework

Photo 5: Example of access staircase to scaffolding with a full enclosure

Table 2: "Enclosure requirements" where partial enclosures are used

- The first aim should be to minimise the release of fibres using low/dust-free work methods and techniques as airborne spread will be unchecked.
- The work area should be segregated and the boundaries clearly marked by suitable warning notices as far as reasonably practicable. High visibility tape should be sufficient in most cases. However in busy/public areas or when children (or pets) are present physical obstructions or barriers might be necessary and the presence of an "outside man" may also be required.
- A partial enclosure utilising a working platform or other suitable access equipment (see Box 5) should be constructed. The platform should be wide enough to allow safe work (probably about 2 metres). The aim is to capture and contain any falling debris/fragments/pieces as much as possible through effective containment. The platform should be fitted with impervious sheeting (eg 1000 gauge polythene) on the floor and all external sides up to 1-1.5 metres. Sheeting on the inner side (ie next to the building) should be up to about one metre (ie barrier height). Supplementary flooring will be necessary to avoid a slip hazard. In addition, further sheeting should be used to protect the building wall. It should be attached just below the soffit (ie at eaves level) and extend into the platform.
- The work area at ground level should be protected using robust reinforced disposable sheeting (eg tarpaulin or other type of flooring or cleanable material which does not cause a slip hazard)(Boards should be used in wet weather). The sheeting should extend out an appropriate distance from the working platform eg 3 metres from the platform where possible (~4-5 metres from the building). The sheeting should cover all surfaces including uneven surfaces. Other items such as garden features (eg statutes) should be temporarily removed if possible or be protected with polythene sheeting. Care should be taken to ensure there are no gaps between sheets. Sheeting should be taped together and pegged down if necessary.
- The type of platform should take account of environmental conditions (particularly wind but also rain/snow etc) and it should be securely attached as necessary.
- Platform height should be set at a suitable level.
- A minimum standard 3-stage airlock (ie at least 1x1x2m) should be employed a ground level. The airlock should be used for entering and exiting the work area in a normal transiting procedure. Preliminary decontamination should be carried out in the airlock every time an operative leaves the work area (Full details in Table 5).
- Where possible, the airlock should be attached to the scaffolding or tower to enable it to be secure (see Photo 2). Otherwise it should be free-standing and secured as necessary.
- The soffit should be removed with minimal breakage.
- The work area should be kept clean and tidy.

7. PERSONAL PROTECTIVE EQUIPMENT INCLUDING RPE

7.1 Operators should wear PPE and RPE which are suitable for the conditions. Type 5 disposable coveralls should be worn. In addition, other types of protective clothing may be necessary where there is not a full enclosure. For example waterproof clothing will be required in wet conditions. Under garments may also be necessary in cold conditions even where full enclosures are used. Any item of PPE or clothing including cold and wet weather garments will have to be treated as contaminated and cleaned using normal decontamination procedures or disposed of as asbestos waste. Ordinary clothes should not be worn under overalls unless it is planned that they will go for disposal. Suitable cold weather clothing should be provided by the employer. Easily cleanable footwear should be worn (ie boots without laces).

7.2 RPE should be suitable for the work as well as being able to provide adequate protection. The type of equipment should be selected on the basis of a risk assessment. The selection process must include a face-fit test (for tight fitting equipment)(see Fit testing of RPE facepieces at http://www.hse.gov.uk/respiratory-protective-equipment/index.htm. The risk assessment will identify the type of RPE that is required. Full-face piece powered respirators will generally be required for AIB soffit removal (ie inside the full or partial enclosure). Disposable (eg FFP3) or half-mask (with P3 filters) respirators can be used for other site activities. PPE and RPE should be worn at all times in the work area including during the transport of waste (along the waste route) and in transit to and from the DCU. RPE should also be worn during pre-inspection or site set-up where any contact with asbestos is likely eg picking up suspect asbestos materials or attaching high level sheeting etc. RPE should also be worn during cleaning of the DCU.

8. WORK METHODS

8.1 The work methods form an essential part of the control regime to minimise the release of fibres. The methods will vary to some extent depending on the nature of the premises. Where possible soffits should be removed whole to minimise the release of fibres. Factors affecting work methods will include: AIB dimensions especially the length of sections; if the AIB has to be “cut” (eg where a soffit is attached to an adjacent semi-detached property); and the method of fixing eg nailed/screwed. Work practices should be selected which eliminate or minimise fibre release. The work will require at least two people. The guidance in Table 3 outlines the type of methods that can be employed for soffit removal. This work method assumes: the fascia board is non-asbestos and is being replaced; the soffit board will have to be “cut” at the edge(s) of the property; the soffit is nailed on or has screws that cannot be unscrewed (screws should be unscrewed where possible); and the soffit dimensions create handling difficulties (eg length >1.5 metres and/or breadth 0.4metres):

Table 3: Work methods to remove AIB soffits

- Split the fascia horizontally to allow access to the soffit (see Note 1).
- Check for signs of damage and debris or dust on the topside of the soffit.
- Vacuum the topside of the soffit with a class H vacuum as far as possible prior to removal.
- Spray the topside of the soffit with dust suppression solution prior to removal.
- Liberally spray screw and nail areas with dust suppression solution during the work.
- Carefully prise the soffit out from the joint then ease back into place to reveal protruding nails or screws. Remove the nails and screws progressively while shadow vacuuming to ensure controlled removal. If the board is crumbly or likely to easily break and fall off, then additional control will be necessary. For example the area around the nail or screw should be sprayed with an adhesive spray and covered in tape.
- Place soffits directly into waste bags or, if too large or bulky, wrap up in 1000 gauge polythene sheeting. Double bag or wrap at this stage if possible. **Never break asbestos materials to fit them in to waste bags.**
- Long thin soffits eg >1.5m will have a tendency to break. Broad soffits eg 0.4m may be too heavy or awkward for one person to handle. Two men should work together during this stage to stop breakage and make handling easier.
- Where "cutting" the soffit is necessary eg at the boundary of a semi-detached property, it should be done cleanly with minimal fibre release. The board should be scored with a sharp instrument (eg knife) and then snapped against a straight edge (eg a similar length piece of timber) Dust control should be applied at the point of snapping eg the second man should shadow vacuum or spray dust suppression. Tape should be applied to the removed edge to minimise the release of dust and debris. The soffit should not be cut with a power or pneumatic tool. The remaining exposed edge should be sealed with an encapsulating paint.
- Any visible dust and debris/cobwebs etc on exposed joist or other surfaces in the roof void should be wiped clean or vacuumed using a Class H vacuum cleaner. If any debris is unable to be removed from nail or screw holes, it should be drilled out (while applying shadow vacuuming) or plugged with permanent sealant. The type of action should be specified in the Method Statement.
- Transfer bags and wrapped items to ground level, double bag or double wrap as necessary and then transfer to a lockable waste skip or vehicle.

Note 1: If the fascia is not to be removed, then work will methods will be slightly different.

- The areas around the screws/nails should be liberally sprayed with dust suppression solution.
- Unscrew screws or prise off nails with a claw hammer.
- Follow the above procedures from "carefully prise the soffit out" onwards.

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Note 2: See Box 4 for situations where nails and screws are difficult to remove.

Table 4: Work methods to remove difficult nails or screws

There are three potential scenarios with fixings:
1. Screws/nails turn and can be undone, even if it means some loosening with lubricant etc
2. Screws/nails stuck and will not turn or come loose
3. Screws/nails etc break off but the ACM is still held in place, in which case the ACM has to be prised past the screw etc which can result in breakage

Tools to remove Nails /Screws etc if stuck or seized
First attempt should always be to unscrew, loosen with WD 40 or similar.
If still stuck, use:

- Pincers, where screw heads protrude above the ACM
- Hacksaw, where there is little for the pincers etc to grip on
- Claw hammer, where there is sufficient head of screw/nail to grip on

8.2 AIB soffit removal using a partial enclosure differs from other types of AIB removal work particularly with regard to the level of containment. Consequently the work will need to be regularly monitored to ensure that the control regime is adequate and that airborne spread is minimised. Personal sampling should be performed on a regular basis (around 10-15% of jobs) to confirm that the control measures are effective. If the control regime specified in this guidance is followed personal exposures for the work are unlikely to exceed the control limit (0.1f/ml 4-hr time weighted average). If higher exposures are recorded then some action will be necessary. In particular the work procedures should be checked to ensure that they are being closely followed. Personal sampling should be performed in all new or unusual circumstances or conditions.

8.3 Personal sampling will also be required where full enclosures are involved. Sampling frequency should be in line with other enclosure work (ie around 10%) and in all new or unusual circumstances or conditions.

9. DECONTAMINATION UNITS AND DECONTAMINATION PROCEDURES

9.1 AIB removal is a significant piece of asbestos work and normal decontamination facilities and procedures will be required. Where a full enclosure is involved, transiting and decontamination procedures will be unchanged. Where a partial enclosure is used, procedures will generally be the same but with minor modifications particularly where wet weather gear is involved (see Table 5). The DCU should comply fully with the requirements for hygiene units in HSG247 “Asbestos, The Licensed Contractors’ Guide”(Reference 3). The DCU should be located as close to the work area as possible. Workers should get dressed in PPE and RPE inside the DCU.

Table 5: Airlock set-up and Decontamination procedures involving Partial Enclosures

- A minimum size 3-stage airlock (ie at least 1x1x2m) should be employed a ground level.
- The airlock plastic sheeting should be non-transparent and the airlock will not require to be under negative pressure.
- A Class H vacuum cleaner and equipment for cleaning RPE and footwear should be located in the inner stage of the airlock.
- The airlock should be used for entering and exiting the work area as in a normal transiting procedure.
- Operatives should wear two sets of coveralls to the work area: a “work” (normally red coloured) and a ”transit” coverall. RPE and PPE should be put on in the DCU as normal.
- After transiting to the airlock, the transit coverall and footwear should be removed and left in the outer stage.
- When exiting the work area for any reason, operatives should carry out a preliminary decontamination in the inner stage of the airlock as normal. The work coveralls should be removed in the middle stage of the airlock (the coverall can go for waste or be left for reuse) and transit footwear and coverall put back on in the outer stage of the airlock.
- If wet weather clothing has been worn, it should be wiped down in the inner stage of the airlock and then removed. It should be carried into the middle stage of the airlock and left for reuse or it can be put on again in the outer stage of the airlock (over the transit coverall) to wear back to the DCU.
- The wet weather gear can be left in the “dirty” end of the DCU for next use or taken into the shower area for cleaning. Once clean it can be carried out into the DCU clean-end for drying.
- Normal decontamination procedures should be followed inside the DCU.
- The airlock may have to be relocated if the work area moves significantly eg from one side of a terraced house to another.

10 CLEANING AND SITE CLEARANCE CERTIFICATION

10.1 At the end of the removal for both types of enclosure, the work area (including waste route) and equipment should be thoroughly cleaned using low-dust techniques (eg wet wipes, tak-rags, vacuuming with a Class H vacuum cleaner). Cleaning should include all timbers and other surfaces especially internal around the soffit. All nail and screw holes etc should be vacuumed and plugged or drilled out (using shadow vacuuming). Cleaning should also include the inside surfaces of the enclosure (full and partial) sheeting, and the ground level sheeting of the partial enclosure. The outer framework of the partial enclosure should be inspected and cleaned as necessary. Any visible asbestos or suspicious debris in the waste route should be removed.

10.2 Site clearance certification should follow normal procedures for the certificate of reoccupation. It should be performed by a UKAS accredited analyst who is independent of the licensed contractor appointed by the client. There should be a preliminary check of site condition and job completeness (stage 1), and then a thorough visual inspection of the enclosure/work area to check the completeness of asbestos removal, and to check for the presence of any

visible asbestos dust and debris (stage 2). Stage 3, clearance air monitoring, should be performed where there is a full enclosure. However, air monitoring will not be expected where there is a partial enclosure (the section on the certificate should be marked as such). Stage 4, the final visual assessment, will take place once the full enclosure has been dismantled or, where a partial enclosure is involved, where the structure and the airlock have been dismantled and all the ground sheeting has been removed. The thorough visual inspection and the final visual assessment are the most important components of the clearance process.

10.3 During the thorough visual inspection particular attention should be paid to internal areas in the proximity of the soffit board and to any lower level ledges, such as windowsills or platform scaffolding, or surfaces where asbestos may have become trapped or deposited. Timber joist and beams should also be checked to ensure no AIB fragments or dust deposits are present. Any contamination should be wiped clean or vacuumed up. Any equipment present inside the enclosure should also be inspected. The analyst should also inspect any areas which have been sealed. Where a seal has been damaged or broken, it may be necessary to check from inside the premises. Suitable arrangements should be made available to enable the inspection to be properly carried out.

10.4 Once the thorough visual inspection has been successfully completed (ie stage 2), the inner surfaces of sheeting of the enclosure (full or partial)(including ground sheeting) should be treated with an adhesive sealant eg PVA. Sheeting should be detached and rolled up with care taken to minimise potential dust generation. Particular attention should be paid to corner sections or overlaps of sheeting which may contain trapped debris or dust. Sheeting should be disposed of as asbestos waste. The working platform should be inspected at this time. Where ground level sheeting has been used, it should be removed and the ground below it inspected for any material that may have escaped through any gaps or holes. Sheeting on any other fixed items should be removed and surfaces checked for asbestos. Any suspect contamination should be cleaned up as asbestos waste. The successful site clearance certification should be recorded and a copy of the certificate passed to the client and occupier.

10.5 In some situations (eg where mobile platforms are used), it is likely that cleaning will be performed in stages (ie progressively) as the platform is moved around the building to allow the work to take place. In these instances, high level cleaning can be done once the soffit has been removed. If ground sheeting is to be moved significantly (eg from one side of a terraced building to the other), then thorough cleaning, inspection and adhesive sealant treatment should be performed otherwise new sheeting should be used. The areas under the sheeting should also be inspected and cleaned up as appropriate at this time.

10.6 All areas around the building will have to be inspected by the Analyst as part of the 4-stage clearance process. Where a working platform has been used, it will have to be re-installed at the various locations around the site to enable the Analyst to conduct the Stage 2 visual inspection.

10.7 At the end of the removal work, the DCU should be thoroughly cleaned. Appropriate PPE should be worn (see paragraphs 7.1-7.2). Subsequently the DCU should be visually inspected and clearance air monitoring (with a

disturbed air test using a brush) carried out in the shower and dirty sections. Where the DCU has been used on the same site for several buildings (eg a domestic housing estate), clearance will only be required at the end of the full job. However, thorough cleaning will be required on a daily basis to prevent accumulation of contamination. The DCU will not require air tests where it has to be removed from a site outside work hours for security reasons. In these circumstances it can be removed to a secure place for a short period (eg overnight or weekends) provided it is locked and no access is allowed. It should be returned to the original site the following workday. A clearance certificate should be issued following a successful clearance air test ie airborne fibre concentrations should not exceed 0.01f/ml (the Clearance Limit).

References:

1. "Work with Domestic Soffits and Rainwater Goods Containing Asbestos Cement", Code of Practice, Glass and Glazing Federation, 2006
2. "Work with materials containing asbestos", Control of Asbestos Regulations 2006/2012, Approved Code of Practice and Guidance, L143
3. "Asbestos, The Licensed Contractor's Guide", HSG247
4. The Work at Height Regulations 2005

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