



Asbestos Cement Roof Sheets Removal and Over Cladding



Introduction

Asbestos-containing material (ACM) is any material or product that contains asbestos fibres. Asbestos cement roof sheets are a form of ACM that was commonly used in construction, particularly for industrial buildings, prior to the widespread recognition of the dangers of asbestos. These sheets comprise a mixture of cement and asbestos fibres, typically white asbestos (chrysotile). Whilst asbestos cement is generally considered low risk when the fibres are securely bound within the cement, it is imperative to understand the potential hazards associated with these materials, particularly when removing or overlaying.

Scope and Purpose

This document provides guidance for contractors, designers, and clients considering the options available when refurbishing a roof with existing profiled cement roof sheets (*commonly known as asbestos or fibre cement sheets*), which requires careful planning due to safety, health, structural, and regulatory concerns. It outlines practical solutions, planning considerations, and safe work practices while emphasising the importance of compliance with health and safety legislation.

Planning Considerations

A comprehensive survey of the existing roof and its location must be undertaken during planning of works. Factors to consider include:

- Testing to determine the presence of asbestos fibres, their type, and quantity.
- Condition of the structure, asbestos cement sheets, roof lights, and glazing.
- Condition of roof and gutters.
- Adequacy of the existing structure to accept the additional load.
- Internal and external access arrangements.
- Overhead power lines.
- Ground conditions for cranes or hoisting equipment.

Structural Assessment

Load Assessment: Original structures may not have been designed to support additional loads, such as solar panels, mechanical equipment, or even over cladding systems without structural reinforcement. Therefore, it is essential to engage a qualified structural engineer to assess the existing structure's capability to support additional loadings both dead and live. This applies equally whether the project involves stripping the existing roof sheet or over-cladding.

Site Assessment

Arrange for the structural engineer to conduct a thorough site visit, typically using a Mobile Elevated Work Platform (MEWP) for roof access.

Calculations

Structural calculations must confirm that no additional structural reinforcement is required to the existing structural frame to support the proposed new roofing, PV or waterproofing system.



Note

If the existing purlins, trusses, or supports are degraded or overstressed, removal may be the only viable option.



Controlled drilling using PVA solution, grease and vacuum

Structural Considerations

- Confirm if main supports exist beneath valleys; absence indicates fragility and necessitates structural validation.
- If the structure has concrete purlins with single-skin ACM sheets, drilling directly into purlins is not viable; At no point should an attempt be made to drill into a concrete purlin to install a secondary member to attach the new roof system as this could damage the reinforcement within the purlin. A galvanised steel top hat should be installed attached with J-bolts to ensure that the integrity of the purlin is not compromised.
- Evaluate the impact on suspended ceilings beneath roofing works. Factor in potential cleaning or replacement post-installation.

Existing Roof Construction

Existing asbestos cement roofs are not always a single-skin construction type. Historic roofs may comprise twin-skin insulated systems, liner systems, spacer arrangements, rooflight combinations and multiple sheet profiles. Existing construction build-up should therefore be fully understood before selecting an over-cladding strategy.

Moisture and Condition Assessment

Existing moisture condition, biological growth, contamination and condensation risk should be assessed prior to encapsulation to avoid trapping defects or introducing long-term performance issues.

SITE SAFETY

Safety planning is paramount in the roofing industry. A competent individual should conduct a thorough risk assessment prior to commencing roof work. This assessment should be tailored to the specific scale and complexity of the project. In all instances, the competent person must ensure that potential hazards are identified, the level of risk is accurately determined, and appropriate control measures are implemented to mitigate any potential risks.

SAFETY NETTING

Hierarchy of Fall Protection

Ensure compliance with the hierarchy of controls as identified by the Work at Height Regulations 2005. Underslung netting should always be the primary method of collective fall prevention. Over-netting should **never be** the initial choice; it is only acceptable when all higher-tier controls have been ruled out through risk assessment and planning. The decision to over-net a roof should be based on identifying and evaluating risks without considering cost or disruption to the business activities below the proposed work. **FASET¹** (*Fall Arrest Safety Equipment Training*) have produced guidance on roof over-netting which reinforces its limitations to provide collective fall prevention.

Ground-Level Segregation

Physical Barrier

Create a clearly demarcated area at ground level beneath roof works each day with physical barriers to prevent unauthorised access beneath the active working area. Even with netting and heavy-duty sheeting in place, these barriers are essential as falling objects cannot be entirely ruled out.

Internal Operative

Risk assess the feasibility of stationing an operative inside the building with direct radio communication to the roof operatives. This operative can immediately halt roof works if ground-level access is compromised or requires controlled access beneath the work zone.

Construction Process

ROOF SHEET REMOVAL OPERATIONS:

Netting Installation

- Install underslung netting first, prior to scaffolding, ensuring those working above the fragile roof sheets are protected against falls from the outset.

THIRD-PARTY PROTECTION

- Maintain operational safety by using reinforced heavy-duty sheeting attached beneath the roof directly behind purlins, effectively containing dust and debris.
- Install netting beneath the reinforced heavy-duty sheeting, providing collective fall protection.

Safe Access

- Utilise proprietary walkways laid securely from eaves to ridge. Avoid directly walking on the roof sheets at all times.
- Ensure walkways are correctly supported at the purlin positions/new roof support system to prevent unsafe cantilevering.

Occupation During Works

- Over-cladding may reduce disruption in some circumstances; however, continued occupation should only be considered following project-specific assessment of asbestos disturbance potential, fixing methods, internal exposure risk and temporary works arrangements.

Operational Considerations

- Plan works around weather forecasts, restricting daily roof sheet removal activities to manageable sections that can be re-covered the same day.
- Conduct thorough cleaning post-stripping, with documented visual inspections, photographic evidence, and signed checklists.

Removing Roof Sheets

- Operatives must be Category B certified and equipped with specific PPE specific to the handling and disposing of asbestos cement roof sheets.
- Double wrap each sheet (or a manageable stack) in heavy-duty 1000-gauge polythene sheeting and seal with tape.
- All waste must be labelled with the appropriate asbestos warning signage.
- Dispose of waste roof sheets properly in licensed, lockable asbestos skips.
- Waste must be transported by a registered waste carrier.
- Must be consigned using a Hazardous Waste Consignment Note (HWCN).



Operatives double-wrap the roof sheets in polythene and seal them with tape, before placing them into a designated skip.

OVER-CLADDING OPERATIONS:

Control of Debris and Dust When Drilling Asbestos Cement Roof Sheets

To provide adequate fixing positions for spacer systems supporting the new roof sheet, fasteners will need to be drilled through the existing asbestos/fibre cement profiled sheet and, in some cases, the liner sheet. It's crucial to prevent dust from the drilling process from releasing fibres into the building or atmosphere.

Project-Specific Assessment

Where over-cladding requires penetrative fixings, project-specific asbestos risk assessments should consider potential dust release from both external and internal surfaces, particularly where twin-skin constructions, liner sheets or concealed voids exist. Dust suppression methods should form only one element of the control strategy and should not be assumed to eliminate fibre release.

Key control measures include:

- **Self-drilling/Tapping Screws with Grease:**
Use self-drilling screws pre-coated with a light grease or petroleum jelly. The grease captures and retains dust created during drilling.

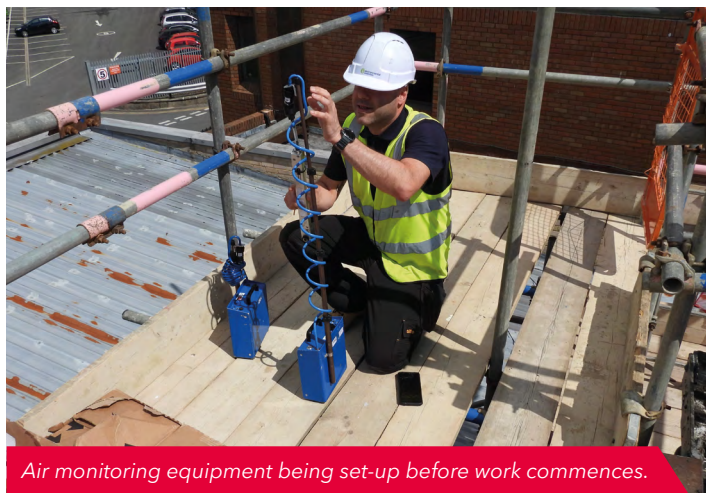


A rail system is installed as part of the overclad arrangement.

- **Wallpaper Paste Application:**
Apply wallpaper paste along the spacer fixing lines before drilling. The adhesive properties of the paste help bind loose dust and fibres, reducing airborne contamination.
- **Pre-wet Surfaces:**
Lightly dampen the drilling area before and during the process to suppress fibre release. Avoid saturating the sheet to prevent weakening. Utilising a diluted PVA solution will act as a binding agent for any released fibres so that they will not blow off when the sheet dry's out.
- **Controlled Drilling Techniques:**
Use slow-speed, low-pressure drilling techniques to reduce dust generation and the risk of sheet breakage. All fasteners should be installed as per manufacturer's recommendations using the correct tooling.
- **Immediate Clean-up:**
Any visible dust or swarf generated during drilling must be cleaned up immediately using damp cloths.

More details are available from **HSE²**.

AIR MONITORING REQUIREMENTS



Air monitoring equipment being set-up before work commences.

Air monitoring is not **legally required** for **non-licensed asbestos work**, but should be considered as good practice:

Background Monitoring

- May be conducted before work starts to establish baseline fibre levels.

Reassurance or Leak Testing

- Carried out during or after work, particularly in sensitive or occupied areas, to confirm airborne fibre levels are below control limits.

Analytical Requirements

- Conducted by a **UKAS-accredited laboratory** in accordance with HSG248 (*Asbestos: The Analysts' Guide*).
- Control limit: **0.1 fibres/cm³ over a 4-hour period** (do not exceed this at any time).

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Operatives working with asbestos cement roof sheets must wear:

Disposable Type 5 (EN ISO 13982-1³) Coveralls

- Must have a hood and be fitted at cuffs/ankles.
- Taped at the wrists/ankles if needed to prevent fibre ingress.

Respiratory Protective Equipment (RPE)

- Minimum: **FFP3 disposable mask** or **half-face respirator** with a P3 filter.
- Must be face-fit tested to the individual.

Gloves

- Disposable nitrile or similar (*non-latex*).
- Avoid reuse; dispose of as asbestos waste.

Safety Footwear

- Steel toe-capped safety boots or shoes must be worn to protect against dropped materials and other site hazards.

POST-REMOVAL CONSIDERATIONS

After roof sheets are removed, the primary post-removal considerations should focus on ensuring safety and preventing exposure to asbestos fibres. This includes thorough cleaning, continued air quality testing, and proper disposal of asbestos waste.

Initial Visual Inspection

- Check for any remaining debris, broken sheet fragments, or dust.
- Look in gutters, roof voids, and around fixings or access areas.

Careful Debris Collection

- Do not sweep or use compressed air.
- Larger fragments should be manually picked up, placed in waste bags or wrapped in polythene.

Damp Cloth Method

- Use damp cleaning methods only—no dry brushing or vacuuming with standard vacuums.
- Wipe down all surfaces, tools, and equipment used.
- All cloths and rags used must be double-bagged and disposed of as asbestos waste.

Final Inspection

- A thorough visual inspection must confirm that the area is free from visible debris and dust.
- For non-licensed work like asbestos cement, air testing and clearance certificates are not usually required but can be done for reassurance, especially in sensitive environments.

Documentation and Compliance

Maintain detailed records of all safety measures, structural validations, cleaning operations, ACM disposal, and installation activities. This documentation protects against potential claims or regulatory scrutiny post-project completion.

Training Requirements

Operatives working with asbestos cement roof sheets must receive appropriate training under the Control of Asbestos Regulations 2012:

ASBESTOS AWARENESS TRAINING (Category A)

Required for:

- Individuals who may **encounter asbestos** during their work but are **not knowingly working on it**.

Covers:

- Asbestos types, risks, locations, and emergency procedures.

Not sufficient for removal or disturbance tasks.

NON-LICENSABLE WORK TRAINING (Category B)

Required for:

- Operatives **intentionally working on non-licensed asbestos-containing materials (ACMs)** such as asbestos cement sheets.

Covers:

- Safe working methods, PPE/RPE use, waste handling, emergency procedures, and task-specific control measures.



Heavy-duty sheeting is installed to protect the building interior—fixed internally before the safety netting is in place.

Must be:

- Practical and task-specific.
- Refreshed **regularly** (typically every 12 months or when work methods change).

SUPERVISOR TRAINING

Supervisors overseeing the works must receive **additional training** to ensure:

- Competency in managing asbestos risks,
- Monitoring control measures,
- Ensuring proper use of PPE/RPE and decontamination procedures.

This type of work should follow **HSE guidance: Asbestos Essentials Task Sheets**⁴, particularly A14 (*Removing asbestos cement (AC) sheets, gutters, etc.*) and **EM series**⁵ (equipment and method sheets).



For more information:

¹ FASET:

<https://www.faset.org.uk/guidance/roof-over-netting/>

² HSE Drilling holes in asbestos cement:

<https://www.hse.gov.uk/pubns/guidance/a9.pdf>

³ Protective clothing for use against solid particulates—Part 1: Performance requirements for chemical protective clothing providing protection to the full body against airborne solid particulates (type 5 clothing)

⁴ Asbestos Essentials Task Sheets:

<https://www.hse.gov.uk/asbestos/essentials/>

⁵ EM Sheets:

<https://www.hse.gov.uk/pubns/guidance/emseries.htm>

Published by

NFRC

020 7638 7663

helpdesk@nfrc.co.uk

nfrc.co.uk

@TheNFRC

July 2026

 **NFRC**
LEADING ROOFING EXCELLENCE

Note: Although care has been taken to ensure, to the best of our knowledge, that all data and information contained herein is accurate to the extent that they relate to either matters of fact or accepted practice or matters of opinion at the time of publication, NFRC, the authors and the reviewers assume no responsibility for any errors in or misrepresentations of such data and/or information or any loss or damage arising from or related to their use. Data and information are provided for general guidance only and readers must always take specific advice in relation to the use of materials, techniques and/or applications.