

RISE

Retrofit information,
support & expertise

Delivering CWI extraction

Supply chain advice pack

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www.riseretrofit.org.uk

Introduction

This advice pack explains how Cavity Wall Insulation (CWI) extraction is delivered in practice. It is written for the retrofit supply chain, including installers, specialist extraction contractors, site managers and PAS-defined roles delivering government-funded retrofit projects.

Overview

CWI extraction is the process of removing insulation materials (such as mineral wool, foam, or polystyrene beads) from the cavity space between a property's inner and outer walls¹.

The primary purpose of CWI extraction is to protect the building fabric and occupants by removing a material that is no longer appropriate for the dwellings context or condition. It is often a necessary enabling measure to allow a property to progress safely through a whole-dwelling retrofit plan, particularly where further energy efficiency measures, such as internal wall insulation, external wall insulation, or ventilation upgrades, are proposed.

CWI extraction should never be treated as a standalone intervention, and must be informed by a robust assessment of the property, including consideration of exposure, wall construction, defects, moisture risk, and the original insulation installation. Decisions to extract insulation should be clearly justified within the retrofit design process and aligned with the overall improvement strategy for the home.

In government-funded retrofit projects, CWI extraction is managed as remedial or enabling work within the PAS 2035 process and subject to TrustMark oversight.

The CWI extraction process typically includes three interrelated stages²:



- Pre-extraction, involving assessment, risk identification, design decision-making, specification, and coordination with the wider retrofit strategy.
- Delivery, covering the physical removal of insulation using appropriate methods, quality control during works, and management of site safety and waste.
- Post-extraction, including verification of outcomes, inspection of the cavity and wall condition, documentation, and confirmation that the property is ready to progress to subsequent retrofit measures.

¹ [Cavclear, Exploring cavity wall insulation extraction](#)

² [Kooka group, Cavity Wall Extraction](#)

CWI extraction in Warm Homes delivery

CWI extraction also aligns with the Warm Homes Plan, which places emphasis on quality, remediation of legacy issues and avoidance of unintended consequences in publicly funded retrofit delivery³. This pack should be read alongside:

- The project-specific Retrofit Design
- Manufacturer and system-specific extraction guidance
- PAS 2030 and TrustMark requirements

It is now recognised that CWI extraction is part of modern decarbonisation programmes. For instance, Equans' delivery of Warm Homes: Social Housing Fund programmes for Babergh and Mid Suffolk District Councils explicitly includes the extraction of old cavity wall insulation prior to installing new fabric measures, demonstrating that removal is treated as a normal enabling step rather than an exceptional failure response⁴.



Figure 1. Equans employee delivering cavity wall insulation extraction

PAS roles and other responsibilities

Clear role boundaries are essential to compliant delivery:

- Retrofit Assessor - identifies risks, conditions and evidence
- Retrofit Coordinator - determines whether extraction is required and manages overall risk
- Retrofit Designer - specifies how extraction is delivered and what follows
- Installer / extraction contractor - carries out the works on site to PAS 2030

³ Department for Energy Security and Net Zero, Warm Homes Plan

⁴ Facilities Management Journal, Equans Secures second contract with Babergh and Mid Suffolk District Councils after warm homes success

These roles and responsibilities are defined within PAS 2035 and reinforced through TrustMark quality assurance requirements.

Pre-extraction

Retrofit assessment

The Retrofit Assessor is responsible for identifying whether there is evidence that existing cavity insulation may be contributing to fabric moisture risk. This includes:

- Recording signs of damp, mould or staining
- Identifying construction type and exposure
- Noting the presence of cavity insulation and visible defects

This evidence forms the basis for later decisions under PAS 2035

Diagnostic investigation

Where insulation-related risk is suspected, further diagnostic investigation is usually required⁵. This typically includes:

- Borescope inspection of the cavity
- Moisture readings and damp mapping
- Thermal imaging where appropriate⁶



Figure 2. Borescope inspection carried out by Harpr Surveyors

⁵ [SAVA, Removing Cavity Wall Insulation](#)

⁶ [SmartStone Energy, Cavity Wall Insulation Extraction](#)

The purpose is to confirm:

- Whether insulation is contributing to the issue⁷
- How extensive the problem is
- Whether full or partial extraction is appropriate⁸

Sign-off

The Retrofit Coordinator (RC) holds responsibility for deciding whether CWI extraction is required. At pre-installation stage, the RC:

- Reviews the Retrofit Assessment and diagnostic evidence
- Determines whether insulation presents an unacceptable moisture or fabric risk
- Confirms extraction is justified, proportionate and necessary
- Ensures the decision aligns with the whole-dwelling retrofit strategy

This role is explicitly defined within PAS 2035 as part of managing and reducing retrofit risk⁹. No extraction works should proceed without RC agreement.

Specifying the approach

Once extraction is agreed, the Retrofit Designer specifies how it will be delivered and what follows. This includes:

- Method and extent of extraction
- Identification of associated fabric repairs
- Consideration of ventilation and moisture behaviour
- Definition of appropriate follow-on measures

Design clarity at this stage reduces the risk of site-led decision-making and post-installation failure.

Informing residents

Guidance from retrofit programmes and specialist contractors consistently highlights the importance of clear resident communication and site preparation due to the disruptive nature of extraction works^{10 11}. Good preparation includes:

- Explaining noise and dust due to drilling and other works
- Confirming access to elevations
- Managing expectations around length of drying-out periods

⁷ [SAVA, Removing Cavity Wall Insulation](#)

⁸ [Berks Insulation, Cavity Wall Insulation Extraction](#)

⁹ [The British Standards Institution, PAS 2035:2023](#)

¹⁰ [Cavity Extraction Ltd, Cavity Wall Insulation Removal](#)

¹¹ [SmartStone Energy, Cavity Wall Insulation Extraction Guide](#)

Delivery

Site set-up and evidence

Prior to drilling, the Installer:

- Protects work areas and installs barriers
- Establishes safe working zones
- Establish safe site power and waste removal
- Records pre-works photographic evidence

Drilling access holes

Extraction typically involves drilling 30–50 mm access holes in a planned pattern across each elevation to allow effective agitation and removal.

This approach reflects widely adopted industry practice across specialist extraction guidance^{12 13}.

Extracting insulation

Extraction methods vary by insulation type:

- Mineral wool - rotating tools or air lances
- Beads - controlled air agitation
- Foams - mechanical cutting or softening

High-powered industrial vacuum systems are then used to remove insulation progressively, in line with specialist contractor guidance and remediation practice¹⁴.

Oversight

During installation, the Retrofit Coordinator:

- Confirms works are delivered in accordance with the Retrofit Design
- Ensures sequencing remains appropriate
- Requires any issues arising to be escalated rather than resolved informally on site

PAS 2035 places responsibility on the RC to oversee compliance and manage deviations.

¹² [Berks Insulation, Cavity Wall Insulation Extraction](#)

¹³ [SmartStone Energy, Cavity Wall Insulation Extraction Guide](#)

¹⁴ [Cavity Extraction Ltd, Cavity Wall Insulation Removal](#)

Post-extraction

Cavity wall insulation extraction does not finish when material is removed. What happens after extraction is critical to protecting the dwelling, the resident and the wider retrofit programme.

Validating the cavity

After extraction works are complete, the cavity must be checked and confirmed as fit for purpose before any further measures can be considered. Key actions include:

- Confirming the cavity is fully clear of insulation and debris using borescope inspection
- Checking that drainage and ventilation paths are open and functioning, including weep holes and vents
- Identifying and repairing any remaining sources of water ingress, such as defective pointing or local masonry defects

These checks are essential to avoid repeating the conditions that caused the initial failure.

Drying and monitoring

Where insulation has been wet or saturated, the structure of the building will usually need time to dry. Good practice includes:

- Allowing a drying period, typically ranging from one to four weeks, depending on exposure, wall construction and severity¹⁵
- Avoiding pressure-washing, render repairs or re-insulation during this period unless specifically designed for¹⁶
- Scheduling follow-up moisture checks to confirm conditions have stabilised before progressing¹⁷

Rushing this stage is a common cause of repeat damp and future resident complaints.

¹⁵ [Communities and Local Government, Guidance and standards for drying flood damaged buildings](#)

¹⁶ [Historic England, Repair](#)

¹⁷ [IKO, BS5250 Management of moisture in Buildings – Summary of changes](#)

Follow-up works

Once the cavity has been confirmed as clean, dry and free from defects, the retrofit can move forward in a controlled and informed way. At this point:

- Re-insulation should only be progressed where the property is now clearly suitable, with exposure, construction type and residual risk fully considered in line with PAS 2035.
- In higher-exposure or higher-risk locations, alternative approaches such as external wall insulation may offer a safer and more robust solution.
- Ventilation provision should be reviewed and, where necessary, upgraded to reflect the changed fabric condition and to maintain healthy internal environments.

The key principle is that extraction must genuinely reduce risk. Follow-on measures should only be taken where they improve long-term performance, not where they risk recreating the same failure conditions that led to extraction in the first place.

Review and sign-off

After extraction, the retrofit coordinator plays a key role by:

- Reviewing all post-extraction evidence (photos, boroscope images, and moisture notes)
- Confirming that the drying period has been adhered to and risks reduced
- Approving progression to the next retrofit stage
- Ensuring records are complete, consistent and audit-ready for TrustMark and funders.

Retrofit coordinator sign-off protects both the supply chain and the resident.

Resident handover

Residents should never be left unclear about what has been done, why it was necessary, or what happens next. A good handover should:

- Explain clearly why extraction was required, what was found during the works, and how this reduces future risk.
- Set out any short-term guidance for the interim period, such as drying times, access considerations or activities to avoid.
- Provide a clear outline of next steps, including likely follow-on measures and realistic timescales.
- Supply relevant documentation, including TrustMark information and any applicable warranties.

Clear, timely communication helps build confidence, manage expectations and reduce the likelihood of complaints.

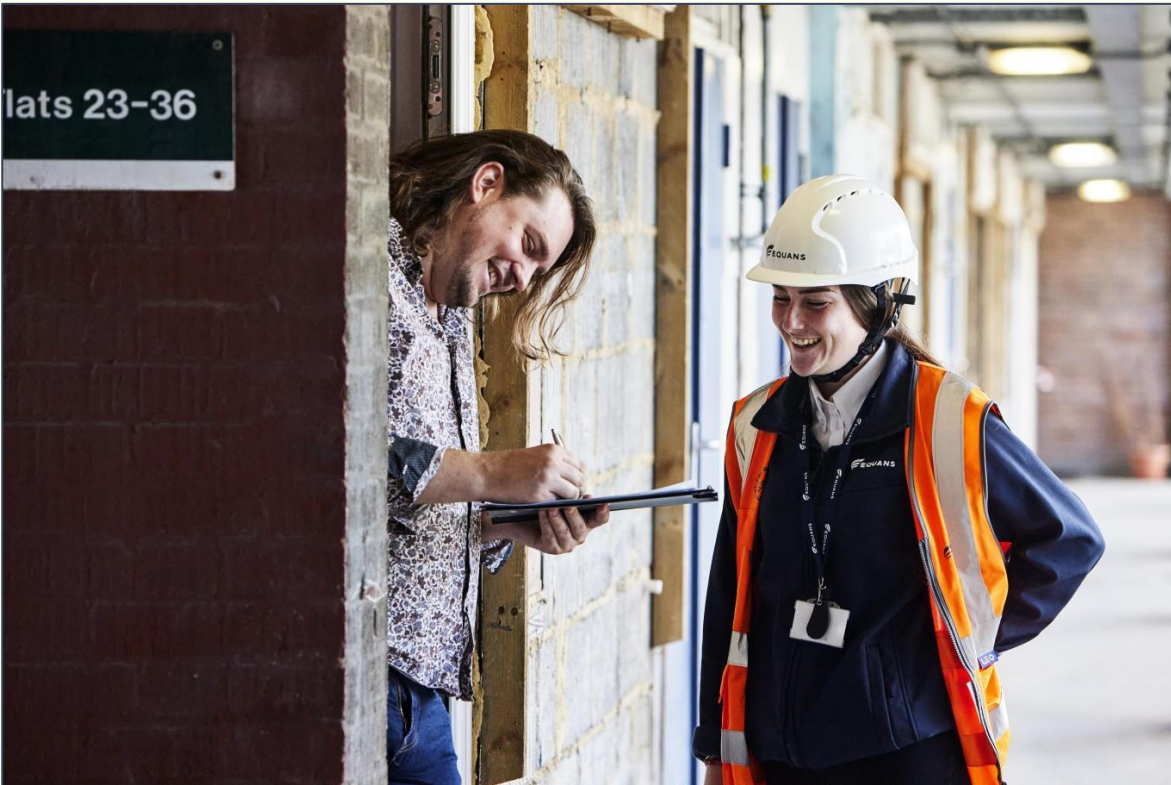


Figure 3. Equans employee engaging with a resident

Case studies

Coastal (Colchester) property with saturated mineral wool



Source: Bark

Key issues found: Saturated mineral wool, cold bridging, mould on internal walls

Cause of failure: Unsuitable installation for exposure zone; voids and slumped insulation

Outcome: Full extraction completed; cavity cleaned and allowed to dry before follow-on measures

Homes with high-risk rain exposure



Source: Blackburn and Darwen Borough Councils

Key issues found: Damp staining, mould on south/west elevations, compromised internal finishes

Cause of failure: Insulation installed in non-standard / hard-to-treat cavities; unsuitable for local climate

Outcome: Extraction recommended; masonry repair and ventilation upgrades specified

Summary

- CWI extraction must follow a structured, PAS 2035-compliant process
- Good preparation, diagnostics and evidence are essential
- Extraction protects residents, building fabric and future retrofit performance
- Clear sequencing enables safe progression to follow-on measures

Resources



Podcast: All RISE podcasts are available [here](#).

Podcast: "Healthy homes, healthy lives: what the research shows" available [here](#).



Masterclass: All RISE masterclasses are available [here](#).

Masterclass "PAS 2035 compliance" available [here](#).



Advice pack: All RISE advice packs available [here](#).

Advice pack: "Internal Wall Insulation – Assessing and Design" available [here](#).

