

SWIP Room in Roof Insulation System Specification – Master Document

Date: July 2025

System: Room in Roof (RIR) Insulation

1. Introduction

The details contained within this document are based on information available at the time of writing. It describes the correct process to install SWIP Room in Roof Insulation in accordance with the recommendations and requirements of PAS2035:2023 and PAS2030:2023.

SWIP cannot be held responsible for unknown site conditions or for the performance of materials other than those manufactured, supplied or branded by SWIP. The requirements of all relevant British Standards and Industry Codes of Practice should be complied with at all times.

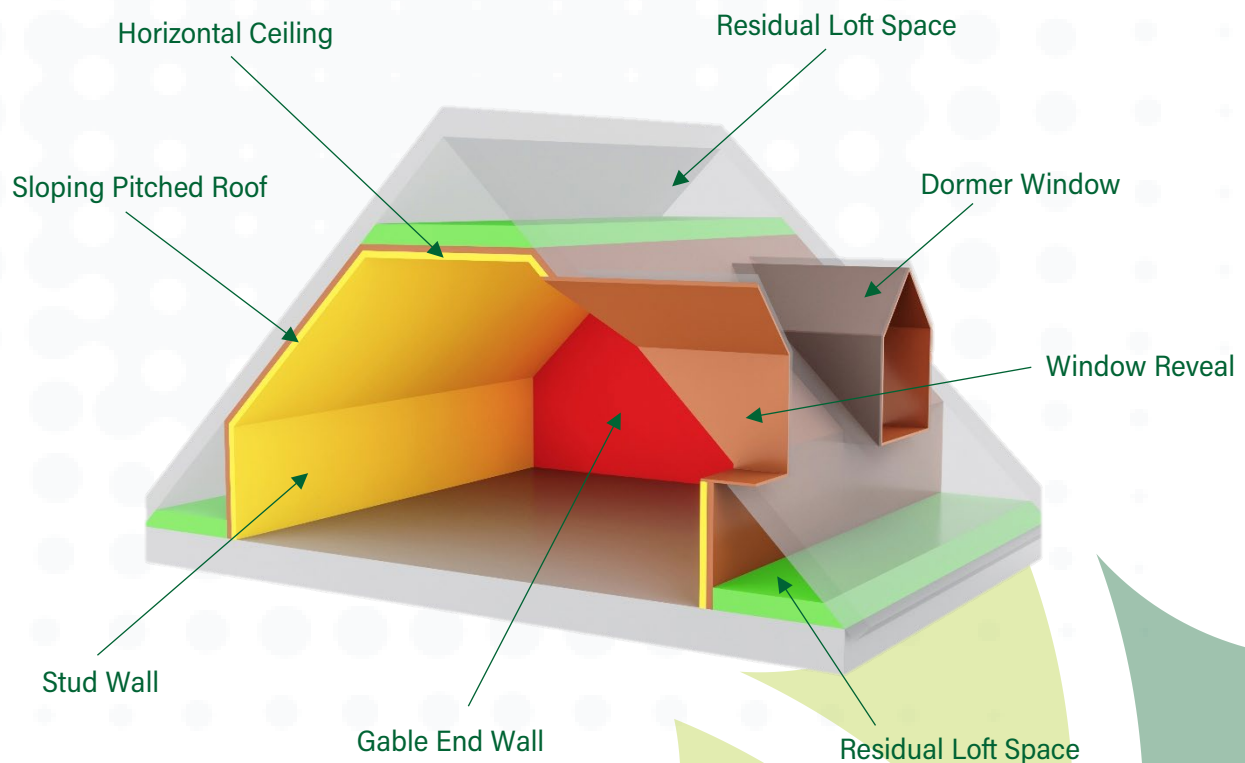
2. Room in Roof

Is the roof space permanently accessible by a permanent staircase, such as one that you are able to walk down facing forwards (loft ladders are not included)?

Is 50% of the height of any common wall less than 1.8 meters?

If the answer is no to either of the above, then the project is not recognised as a Room in Roof.

3. Elements of Room in Roof



4. Pre-install Survey

Prior to any work commencing a survey of the area to be insulated should be conducted by a suitably qualified individual. This survey should confirm the area fits the Room in Roof criteria and addresses the considerations below, therefore ensuring that any remedial work required is completed prior to work commencement.

- Assess that the roof structure is sound and that there are no signs of damp.
- The roof and sarking felt should be checked for any tears, rips and holes.
- Check to see if there are any loose or missing roof tiles or damage to the felt.
- A schedule should be outlined for the removal of fixtures and fittings that are not to remain in place whilst the installation is being completed.
- Check for signs of wildlife, especially bats or other legally protected species.
- A plan should be outlined to address all areas of potential cold bridging and areas of limited space.
- Any electrical connections housed within the loft should be inspected for safety compliance.
- A detailed specification should be completed to establish which insulation type is best suited for the variation of wall areas within the roof.
- All ventilation for existing fuel-burning appliances within the room in roof must be assessed by a suitably competent person, to determine if the pre-existing ventilation is adequate or whether further remedial works are required. See section 8.
- Ensure that all the appropriate Personal Protection Equipment (PPE) and tools are readily available. The work will be undertaken within confined spaces and ventilation through open windows should be provided where possible and or dust extraction equipment.
- If possible, set up a cutting zone outside of the roof area to reduce the dust within a confined space.

5. SWIP Materials

Reveal Board.

SWIP 12.5mm with cementitious screed or 27mm Insulated Plasterboard

- Insulation Type: Extruded Polystyrene
- Thickness: 12.5mm & 27mm
- Thermal conductivity: 0.033W/mk
- Size: 1200mm x 600mm (12.5mm) 1200mm x 2400mm (27mm)

Method of fixing

SWIP approved (minimum of 2 mechanical) fixings and full bed of adhesive:

- Sealant: SWIP Multi-Purpose Sealant (acrylic)

SWIP RIR Insulation board

- Insulation Type: Polyisocyanurate Foam Board
- Thickness: 62.5mm
- Thermal conductivity: 0.025W/mK
- Size: 1200mm x 2400mm

Method of fixing

SWIP approved IWI fixings:

- Sealant: SWIP Multi-Purpose Sealant (acrylic)

SWIP IWI Batt

- Insulation type: Ecosse® Glass Mineral Wool
- Thickness: 95mm/65mm
- Thermal conductivity: 0.032W/mK (95mm) / 0.035W/mK (65mm)
- Size: 1200mm x 555mm

SWIP IWI Stud

- Insulation Type: Extruded Polystyrene laminated to 15mm OSB
- Thickness: 95mm/65mm
- Thermal Conductivity: 95mm/0.033W/mK
- Size: 2400mm x 50mm

SWIP IWI fixings

- 150mm x 6mm – generally for 95mm system
- 120mm x 6mm – generally for 65mm system

Vapour Control Membrane

SWIP Closed Vapour Control Layer

- 50 x 2.5m (folded to a 1.25m roll) Or:
- SWIP Open Intello Plus Membrane 50m x 1.5m roll

SWIP Stud Wall Batt and Netting

System Insulation: Glass Mineral Wool

- Thickness: 95mm/65mm
- Thermal conductivity: 0.035W/mK/
- Size: 1200mm x 555mm x 95mm/65mm
- Netting: SWIP Insulation Netting

SWIP Loft Roll

System Insulation: Glass Mineral Wool

- Thickness: Loft Roll 100mm, 150mm, 170mm & 200mm
- Thermal conductivity: 0.044W/mK (Loft Roll)
- Size: length 12.18m; width 2x570mm/3x380mm (Loft roll)

6. Handling and storage - SWIP Room in Roof Insulation Boards

SWIP RIR boards are easy to handle and install, being lightweight and easily cut to size (where necessary). They are supplied shrink-wrapped in polythene packs, which are designed for short-term protection only. For longer-term protection on site, the products should either be stored indoors, or under cover and off the ground or protected with light- coloured opaque polythene sheets.

SWIP Batt and SWIP Stud should not be left permanently exposed to the elements. SWIP RIR

Reveal boards should be kept flat and not left on end. Damaged boards must not be used.

7. Installation Method

7.1. SWIP Reveal Board

- The SWIP Reveal Boards are cut using a suitable fine-toothed hand saw or utility knife to size as necessary and laid butt-jointed with no gaps if possible. Any gaps between the boards should be filled with small slithers of the insulation and should not be left open, as this will decrease the thermal performance.
- The SWIP Reveal Boards should be fully bedded with adhesive and additionally secured with a minimum of 2 localised mechanical fixings per board. Tap the boards back and check to ensure they are level. Complete continuity of insulation should be achieved around the opening at the junctions of heads, jambs and sills by cutting back the plasterboard at the edge of the laminate board.

7.2. SWIP 62.5mm RIR Board

- The SWIP RIR Boards are cut using a suitable fine-toothed hand saw or utility knife to size as necessary and laid butt-jointed with no gaps if possible. Any gaps between the boards should be filled with small slithers of the insulation and should not be left open, as this will decrease the thermal performance.
- The SWIP RIR Board can be mechanically fixed into the timber or alternatively through any existing plasterboard using SWIP 100mm fixings. Fixing centres should not be greater than 300mm centre to centre.

7.3. SWIP IWI

- On solid or unfilled cavity wall areas, including Gable ends, the SWIP IWI System should be installed.
- Where plaster is sound, fix directly through it, If the plaster is not sound, remove decayed plaster and, for greatest airtightness, seal with a parge coat. SWIP Studs are to be installed directly onto the substrate with the OSB facing into the room.
- Screw fix SWIP Studs horizontally to the foot of the existing wall using SWIP screws and wall plugs as supplied. A minimum fixing penetration of 40mm is required into the existing masonry wall (excluding thickness of any possible plaster – Please ensure the depth of plaster has been checked prior to ordering). A minimum of five fixings per stud are required but the number can be increased as required, or as dictated by site conditions.
- Position the fixings at 600mm maximum centres and 75mm from the end of each stud. SWIP Studs should be positioned so that, if the wall is bowed or not vertical, the verticality of the SWIP IWI System is maintained, (if the customer requires a vertical finish to the wall). The horizontal SWIP Studs should also be located so that the OSB facing studs can provide a fixing point for skirting boards, and any other fixtures as required.
- Screw fix SWIP Studs horizontally at the top of the wall following the same process as above.
- Alternatively, where the ceiling line is sloped or irregular, cut SWIP Studs to extend from the horizontal SWIP Stud at the foot of the wall to fit tightly under the ceiling and fix as previously described.
- If there are irregularities in the wall surfaces, pack out the SWIP Studs using suitable insulating materials which are unaffected by moisture. Ideally offcuts of the XPS foam from waste sections of stud can be used or alternatively pieces of Batt.

- Friction fit the SWIP Batts between the SWIP Studs ensuring the insulation zone is completely filled. There should be no gaps between the slabs and they should be installed to be in intimate contact with the SWIP vapour control layer and the wall, fully filling the space between the studs. Where insulation requires cutting, it should be cut 5mm wider than the space it is intended to fill. Once the insulation has been fitted install the SWIP vapour control layer.

7.4. Installation of SWIP Vapour Control Layer

- The Vapour Control Layer should be installed in accordance with the recommendations of BS5250: 2021 'Code of practice for control of condensation in buildings' and should be installed on the warm side of the insulation.
- Roll out the membrane and fasten it using galvanised staples with a width of at least 10 mm and a length of 8mm at intervals of 100-150mm. Install the membrane to stop approximately 40mm short of adjacent building components to allow space for SWIP adhesive tape* to be applied to the stud.
- All over laps in the vapour control layer and junctions at interfaces with other elements and materials in the building e.g. metal and timber studs and joists, cementitious boards and window and doorframes should be sealed with SWIP adhesive tape*. The efficiency of the vapour control layer will be reduced unless it is effectively sealed to other elements of the building.
- Whenever possible, laps in the vapour control layer should be coincident with a SWIP Stud in order to aid the sealing process. The number of laps can be kept to a minimum by installing full roll widths of the vapour control layer.
- Clean down the surface of any dust or debris that might affect the adhesion of the adhesive tape*.
- Remove the release film from the tape* and centre over the edge of the membrane and gradually stick it into place.
- Where the heads of fixings penetrate the SWIP vapour control layer they should be sealed with SWIP adhesive tape*, as should any tears, holes or cuts. The tape should overlap the damaged area by a minimum of 75mm. Where larger areas of damage occur in the vapour control layer they should be repaired with a `patch` and SWIP adhesive tape* applied as detailed above.
- Rub along the tape* firmly ensuring that there is sufficient resistance pressure leaving a solid well adhered tape with no air gaps.
- Once the Vapour Control has been installed then plasterboard can be fitted.

*SWIP Adhesive Tapes

- For SWIP green VCL use Foil tape for all areas.
- For Intello Membrane use Tescon Vana adhesive tape (Blue tape) on overlaps and Contega Solido SL tape (White Tape) to seal edges

7.5. SWIP Loft Roll System

- Unroll the SWIP Loft Roll and lay between the joist, ensuring that it fits tightly against the side of the joists.
- Ensure that the eaves ventilation is not likely to be compromised and is kept clear.
- If required, the SWIP Loft Roll can be cut using a utility knife.
- If a second layer of SWIP Loft Roll is required to be installed, then this should be laid on top

of the first layer at a 90-degree angle.

- It is recommended that an access hatch is maintained to allow for future access. Always ensure the hatch is suitably insulated.

7.6. Services and Fixtures

- **Electric Cables:** Electric cables give off heat when in use and should be routed where they will not be covered by thermal insulation, so the heat can be dissipated. If cables need to be located within insulation, they should be run in conduit and possibly increased in size. Advice on this should be sought from a suitably competent person, such as a qualified electrician.
- **Socket Outlets:** When new sockets are installed or socket outlets on the existing external wall need to be repositioned, it is not classified as “notified work” (according to Approved Document P, 2006 Design and installation of electrical installations) and can be carried out by a suitably competent person. All electrical work should be carried out in accordance with Approved Document P, the relevant part of the current IEE Regulations and associated Guidance. Notifiable work will be required if one of the following is required:
 - The installation of a new circuit.
 - The replacement of a consumer unit.
 - Any addition or alteration to existing circuits in a special location as determined by the current edition of Approved Document P.
- **Socket and Switch Boxes:** Socket and switch boxes should be fixed in accordance with the manufacturer's instructions. **Important Note:** If in doubt regarding any electrical work, consult a suitably competent person, such as a qualified electrician.
- **Fixing Radiators:** Do not fix radiators to plasterboard alone. Sufficient support is only provided when radiator brackets are fixed:
 - Through the plasterboard into the SWIP Studs.
 - To horizontal timber battens, fixed through the plasterboard to the SWIP Studs.
 - To horizontal timber battens, fixed between the SWIP Studs and to the masonry wall.
 - To Knauf Drywall Fixing Channels, screw-fixed to the SWIP Studs behind the plasterboard.
 - Timber battens are suitable for loads up to 75kg per metre run parallel to the plasterboard and should be used for heavier radiators. Knauf Drywall Fixing Channels are suitable for loads up to 50kg per metre parallel to the plasterboard and can be used for smaller radiators.
- **Flues:** Care must be taken to ensure that flues or ventilation measures for combustion appliances are not blocked or adversely affected by the installation of the SWIP IWI System. Minimum requirements for the surrounding walls of a log burner/flu is 200mm as long as this can be achieved the IWI system can be installed around this feature. The heat generated from the fire will reduce the risk of mold and condensation, however these are recommendations as a system designer so please check with your funder before proceeding.
- **Combustion Appliances:** It is imperative that ventilation requirements for gas, oil or coal fired combustion appliances are not compromised by the installation of the SWIP RIRI System and the system does not interfere with the supply of fresh air to the appliance. Recommendations, guidance and compliance with the Building Regulations for the ventilation of combustion appliances can be found in Building Regulations Approved

Document J - Combustion appliances and fuel storage systems.

- **IMPORTANT NOTE:** Please ensure that all relative inspections have been undertaken with regard to the air tightness of the building and any ventilation / gas issues that need to be address. Care should be taken with gas appliances with a rating of 7 KW or above, and all inspections and subsequent works should be carried out by a suitably qualified gas engineer.
- **Media Cables:** Television, satellite and internet cables may require re-positioning or cable entry points may require re-drilling. It is advisable to get advice from a suitably qualified person regarding the movement of any of these cables.
- **Vents:** Do not cover up any air vents. Crossflow ventilation is essential and is required within a roof to prevent condensation from forming.
- **Services pipework:** The re-positioning of pipework may be required with the installation of the SWIP RIRI System. All pipework and water tanks should be insulated in line with the CITB guide: General Requirements and Guidance for the installation of cold roof loft insulation (Version 2 September 2013). It is recommended that all advice and installation of services such as water, gas etc, is undertaken by a suitably qualified individual.
- **Downlights and recessed lights:** The existence and safe operation of downlighters and other light fittings is considered and treated with in line with the current guidance in the General Requirements and Guidance for the installation of cold roof loft insulation (Version 2 September 2013). Where recessed lights have been installed through the ceiling, there should be measures taken to safeguard and prevent air leakage around the lights into the roof voids. These can be covered and sealed with an F-cap fire rated hood. Recessed lights covers should be installed to CITB guide: General Requirements and Guidance for the installation of cold roof loft insulation (Version 2 September 2013).
- **Access hatches:** If there is no current access point, then a new one can be provided with an access hatch. When installing these new openings, this should be done in accordance with the relevant Building Regulations. If the access point is to be permanent, ensure that it is installed in an acceptable position for the customer. All access hatches should be insulated with the relevant insulation.

8. Ventilation

- Without proper ventilation, a property could suffer from condensation issues after the insulation has been installed in a room in roof. It is therefore essential that ventilation is either maintained or enhanced where required.
- In a room in roof, crossflow ventilation is achieved when air can travel up one side of a sloping ceiling, across the loft area at the top and back down the other side.
- If the ceiling is vaulted, there is no crossflow ventilation and additional measures must be undertaken to ensure adequate ventilation is provided.
- Guidance should be taken from PAS2035:2023 Annex C (Normative) Requirements for the provision of adequate ventilation.

9. Building Regulations

Room In Roof insulation work is notifiable under the Building Regulations to a Building Control Body (BCB), such as a local authority or an approved inspector.

It is not necessary to notify a BCB in advance of works which is to be carried out by a person registered with a competent person self-certification scheme listed in Schedule 3 of the Building Regulations.

Where work is carried out by a person registered with a competent person scheme, regulation 20 of the Building Regulations 2010 and regulation 20(1) of the Building (Approved Inspectors etc) Regulations 2010, require that the occupier of the building be given, within 30 days of the completion of the work, a certificate confirming that the work complies fully with all applicable building regulation requirements.

9.1. The thermal upgrading of the wall area (domestic dwelling) according to Approved document L1B of the Building Regulations stipulates a threshold of $0.70\text{W/m}^2\text{K}$, with an improvement target of $0.30\text{W/m}^2\text{K}$ if technically attainable. (This includes the cheeks of a dormer window and gable end walls). The thermal upgrading of the roof area (domestic dwelling) according to Approved document L1B of the Building Regulations stipulates a threshold of $0.35\text{W/m}^2\text{K}$, with an improvement target of $0.16\text{--}0.18\text{W/m}^2\text{K}$ (depending on the insulation position) if technically attainable.

9.2. The following Approved Documents of the Building Regulations should be referred to in addition to Approved Documents L1B.

Approved Document F Ventilation.

Approved Document G Sanitation, hot water safety and water efficiency.

Approved Document H Drainage and waste disposal.

Approved Document G Combustion appliances and fuel storage systems.

Approved Document P Electrical safety.

For non-domestic properties the following Approved Document should be referred to:

Approved Document L2B - Conservation of fuel and power in existing buildings other than dwellings.

The above is based on information available to us at the time of preparation and no responsibility can be accepted for errors or omissions. SWIP reserves the right to alter issued details without prior notice. SWIP have taken every consideration of the requirements of the CDM regulations 2015 in preparing the above, but remind the designer that it is their responsibility to ensure compliance. Information on health and safety is available on request. Please see our standard terms and conditions.