RENOVATE | INSULATE

Better Homes

Energy efficient insulation solutions for renovation



UNILIN

Better **Homes**

RENOVA/IN

A renovation project brings exciting prospects for your home – a new aesthetic appeal, additional space and an increase in your property's value. When you upgrade your insulation, you can expect to enjoy improved energy efficiency and a more comfortable environment.

By choosing Unilin Insulation as your renovation partner, you are assured of the best product range and technical advice to suit your project.

We push boundaries to improve people's quality of life by creating **Better Spaces. Better Homes.**

UNILIN



ATE
SULATE

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Reducing **Energy**

Renovation of existing dwellings plays an increasingly important role in the reduction of energy use. Protecting our planet and contributing to a more sustainable future for us all.

At Unilin, our commitment to renovation is part of our global ONEHOME strategy.



30%

UP TO 30% OF HEAT CAN BE LOST THROUGH POORLY INSULATED ROOFS



30%

UP TO 30% OF HEAT CAN BE LOST THROUGH POORLY INSULATED WALLS

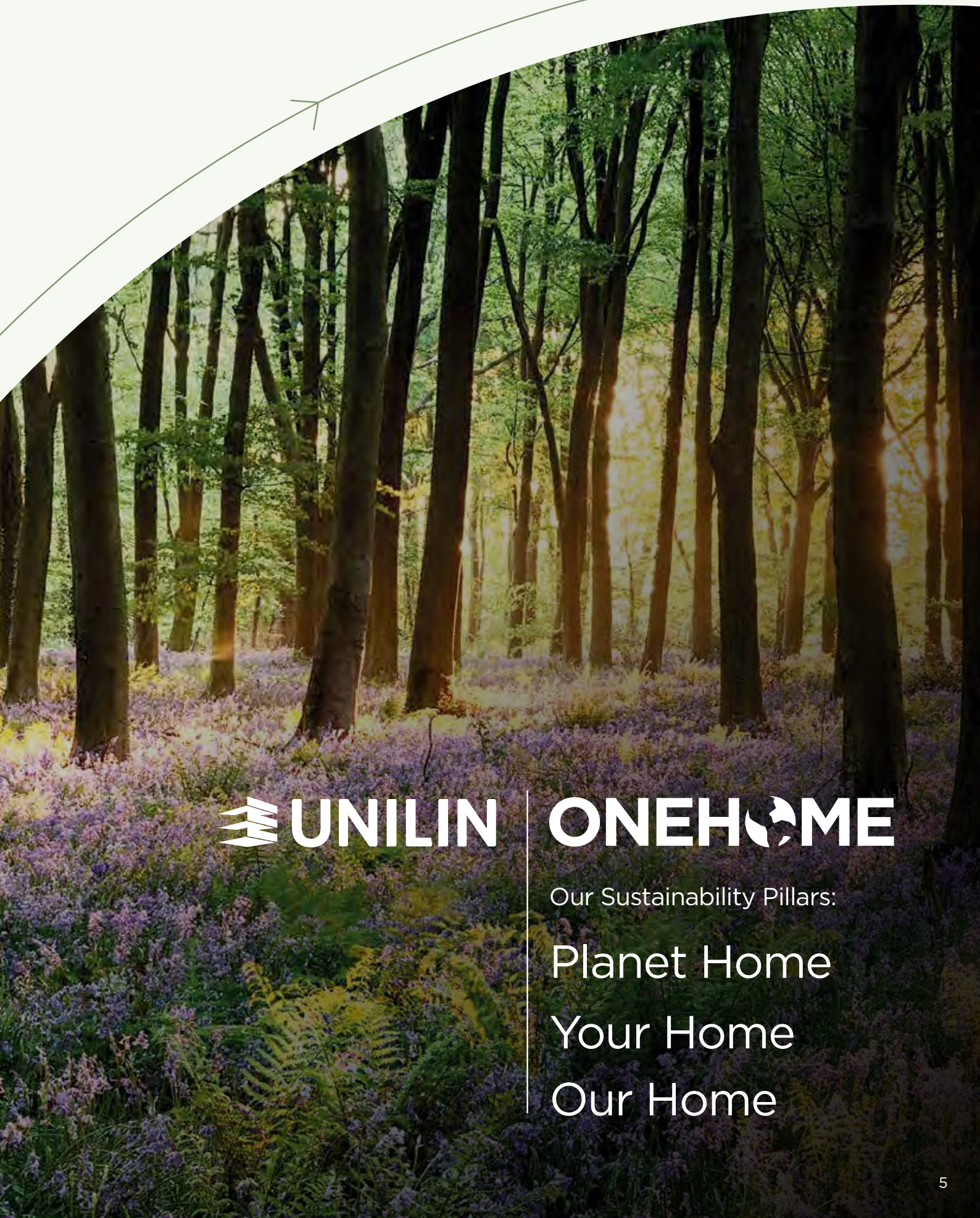


10%

UP TO 10% OF HEAT CAN BE LOST THROUGH POORLY INSULATED FLOORS

Source: seai.ie





UNILIN | ONEHOME

Our Sustainability Pillars:

Planet Home

Your Home

Our Home

Why Renovate?

Reinvigorate your living space

Your renovation project gives you one opportunity to get your insulation right, so it is important to consider it carefully. Unilin Insulation will help guide you to the best insulation solution for your home.

Benefits of Insulation

Enhanced comfort and warmth
Insulation has the single biggest impact on energy efficiency. It helps to reduce heat transfer and maintain consistent temperature levels throughout the home.

Reduced energy
Insulation directly impacts energy use. Combining the correct insulation choices with a low energy heat source, such as a heat pump, enables the heating system to run efficiently and to reduce your home's energy demand.

Helps protect your home & health
Insulation can help alleviate condensation and mould, protecting the fabric of your home and your health.

Lower bills
Investing in good quality insulation can help deliver substantial home energy reduction, providing short and long-term savings.





Renovation in Practice

Planning for a better home

We are here to help you get the best results from your renovation. While a piecemeal approach may gradually improve the energy efficiency of your home, a comprehensive whole house approach is more effective in improving efficiency and reducing running cost in the long term.

Whole house renovation takes the entire home into consideration, ensuring that installations and refits are planned in a step-by-step manner.

It is advisable to talk to a qualified Energy Assessor about your project for specific guidance on a whole house approach.

The improvements you make to upgrade your home's energy performance can range from simple changes like switching to energy efficient lighting to more extensive solutions like drylining your internal walls.

The table below gives an indication on costs and CO_2 savings from some of the major renovation measures you can undertake.

Area	Improvement measure category	Capital Cost (indicative)	CO_2 Saving (kg/yr) (indicative)
Lighting, Appliances	Energy efficient appliances	£	✓
	Energy efficient lighting	£	✓
Renewables	Air Source Heat Pump	£ £ £ £ £	N/A
	Solar PV	£ £ £	✓✓
Windows	New or replacement windows	£ £ £ £ £	✓✓
Insulation	External wall insulation	£ £ £ £	✓✓✓✓✓
	Drylining insulation	£ £ £ £ £	✓✓✓✓✓
	Floor insulation	£ £ £ £	✓✓

Capital Cost Tiers		CO2 Saving Tiers	
£	<250	✓	<200
£ £	<2500	✓✓	<500
£ £ £	<5000	✓✓✓	<750
£ £ £ £	<7500	✓✓✓✓	<1000
£ £ £ £ £	7500+	✓✓✓✓✓	1000+

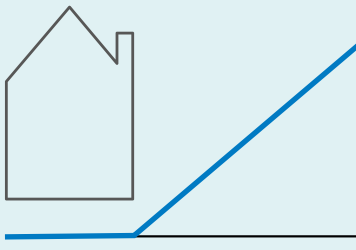
Table adapted from Retrofit Academy, Improvement Option Evaluation and Medium Term Improvement Plans. Peter Rickaby and Alan Pither. retrofitacademy.org

Piecemeal Vs Whole House approach.

Whole House approach

Work is phased, meaning interventions can be designed to work together to deliver the most benefit as effectively as possible.

A co-ordinated phased approach means each phase is planned to accommodate and facilitate any future work without disruptions.



Grant availability
Adopting a whole house approach also allows you to maximise financial assistance available through grants. For those eligible, these grants help alleviate the financial impact of a renovation project and will deliver savings through energy bill reduction.

Visit **seai.ie** for more information.

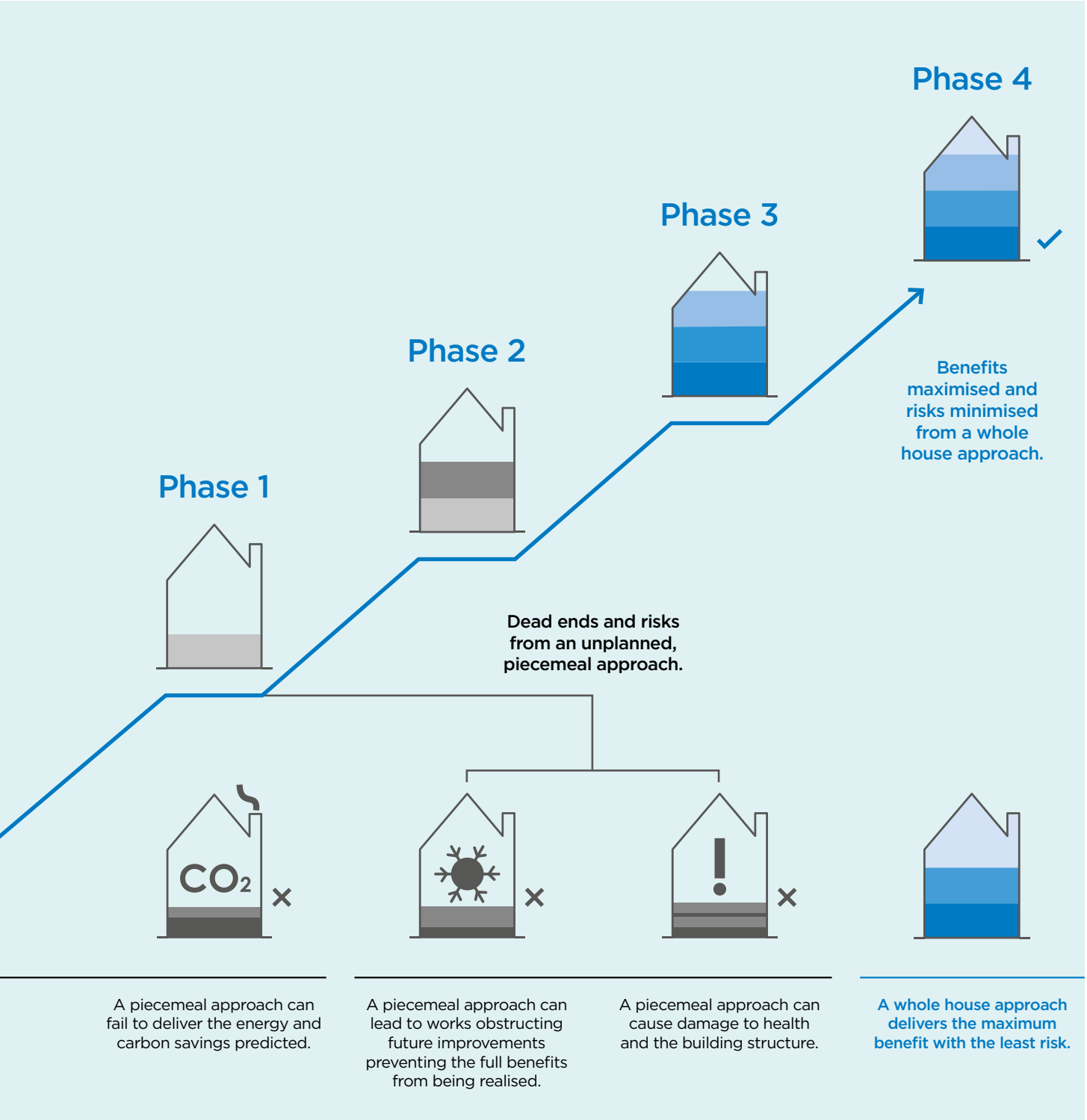


Figure 5.1 - Adapted from LETI piecemeal versus whole house approach diagram.

Solutions for every area

Improve your home's performance and value from top to bottom with Unilin Insulation's range of trusted insulation products.

Roofs

RAFTERLOC
Variable Width
Pitched Roof Board



XT/PR_UF (ROOFS)
Pitched Roof



FR/ALU
Mechanically Fixed



XT/WALK-R
Insulated Attic Decking

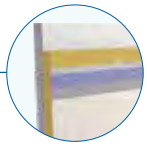


External Walls

WARM-R SD E GREY EWB
External Wall Insulation

External Insulation Option

STONEWOOL
External Wall Insulation



For further details see pages 12-22



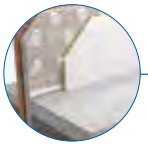
Internal Walls

Thermal Liners



XT/TL-MF
Drylining Walls: Mechanically Fixed

Other Thermal Liner Options



XT/TL
Drylining Walls Fixed with Adhesive Dabs



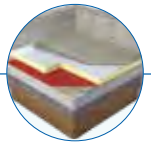
SR/TBFL-MF
Fireline Thermal Laminate

Framing Wall Option



XO/FB
Steel & Timber Frame

Floors



XO/UF
Solid & Suspended Floors

Floor Insulation Option



XT/PR_UF (FLOORS)
Ground Supported & Suspended Floors

External Walls

External Wall

Insulating exterior walls not only makes a building more energy efficient, it is also a great option when interior space is at a premium.



External Wall Insulation Solutions

Find out more at:
unilininsulation.ie/betterhomes

WARM-R SD E GREY EXTERNAL WALL

External Wall Insulation

Warm-R WRA/SD is a high quality expanded Polystyrene containing integrated graphite within the cell structure that reflects and absorbs radiant heat resulting in an improved thermal insulation performance.

Installation guidance may vary. Please check with the project system supplier.

BENEFITS

- Extensive range of sizes and thicknesses
- Thermal conductivity of 0.031 W/mk

MOSTLY USED WHEN

- Interior space is at a premium



STONEWOOL

External Wall Insulation

Stonewool EWI is an insulation solution specifically designed for external wall insulation systems where a higher density slab and non-combustible fire performance is required.

Unilin's Stonewool EWI insulation provides a uniform, high density solution that won't shrink or degrade over the lifetime of the building.

Installation guidance may vary. Please check with the project system supplier.

BENEFITS

- Euroclass A1 fire classification
- Improved acoustic performance

MOSTLY USED WHEN

- Interior space is at a premium

Please contact our Technical Team for more information



Internal Walls

Thermal Liners

When upgrading an existing property, the addition of an insulated thermal lining to the inside of a wall, roof slope or ceiling will dramatically improve your home's energy efficiency.



Internal Wall Insulation Solutions

Find out more at:
unilininsulation.ie/betterhomes

XT/TL

Drylining Walls Fixed with Adhesive Dabs

Thin-R Thermal Liner (Dot & Dab) is a composite insulated panel of Unilin PIR insulation core with a composite kraft facing bonded to 12.5mm tapered edge plasterboard for internal applications, fixed with an adhesive bonding.

BENEFITS

- Insulation & Drylining in one application
- Suitable for a variety of Wall Types

MOSTLY USED WHEN

- Walls are plumb, in good condition and when interior space isn't restricted



XT/TL-MF

Drylining Walls: Mechanically Fixed

Thin-R Thermal Liner (Mechanically Fixed) is a composite insulated panel of Unilin PIR insulation core with a composite foil facing bonded to 12.5mm tapered edge plasterboard for internal walls, sloped roofs and ceilings. It is only suitable for mechanically fixed applications.

BENEFITS

- Insulation & Drylining in one application
- Suitable for a variety of Wall Types

MOSTLY USED WHEN

- On older walls and uneven surfaces and when interior space isn't restricted



SR/TBFL-MF

Fireline Thermal Laminate

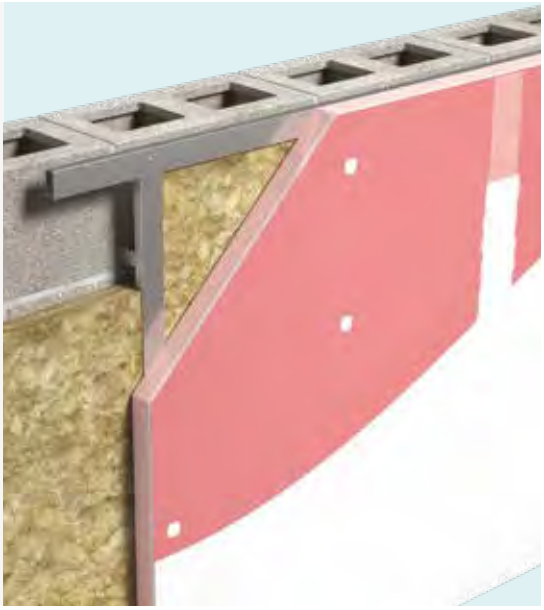
Safe-R Fireline Thermal Laminate is a composite insulated panel comprising of a rigid Phenolic core and 15mm Fireline plasterboard achieving a Euroclass B-s1 d0 reaction to fire classification for internal applications.

BENEFITS

- Reduces intrusion into living area
- Reduces the risk of condensation

MOSTLY USED WHEN

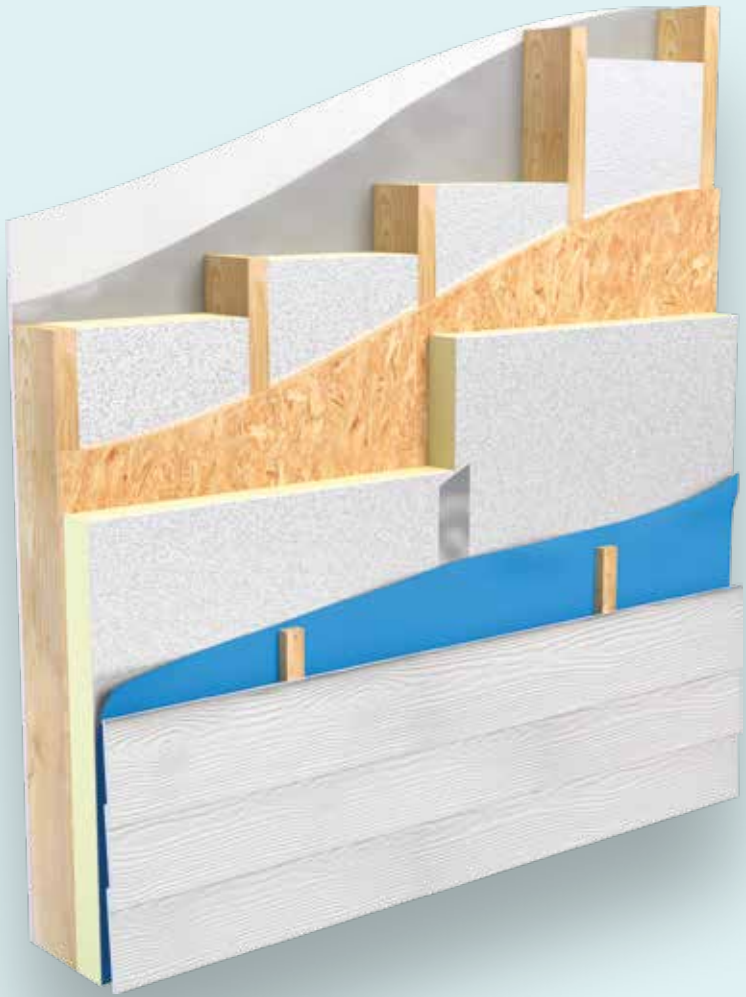
- On older walls and uneven surfaces and when interior space isn't restricted



Framing

Framing Board

Framing Board wall insulation can be fitted within the frame or used to line either internally or externally. This reduces heat loss, improves thermal performance, for a more energy efficient home.



Wall Insulation Solution

Find out more at:
unilininsulation.ie/betterhomes

XO/FB

Steel & Timber Frame

XtroLiner Framing Board is designed for use in a wide range of constructions including steel or timber frame applications.

The framing board can be used between studs or as an insulated sheathing board.

BENEFITS

- Suitable for renovation up to 15m in height in Ireland
- Suitable for use in steel and timber frame systems

MOSTLY USED WHEN

- Where better thermal performance or reduced thickness is required



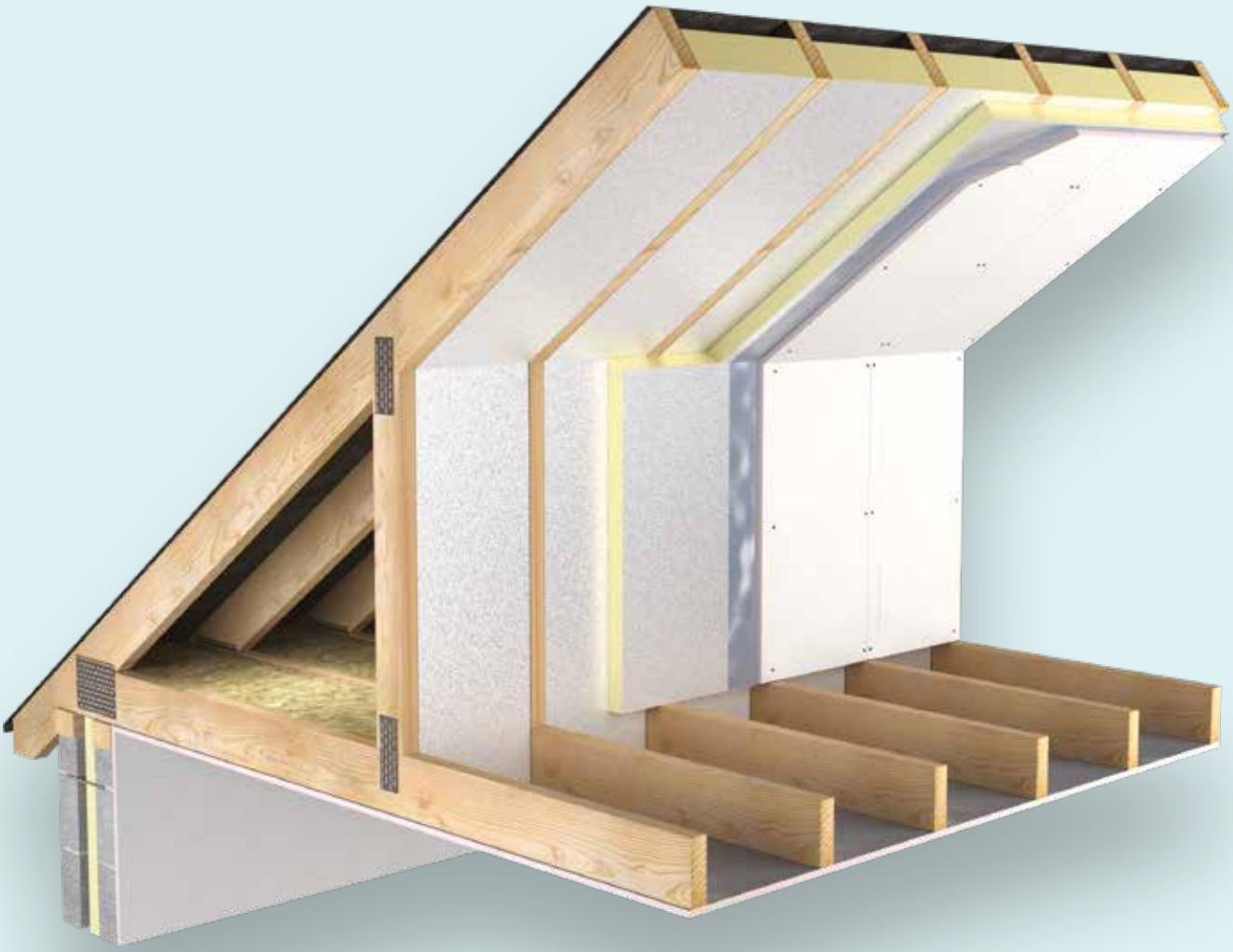


Originally featured in Passive House magazine 2021.
Images: @PaulTierney Photography

Roofs

Roof & Attic Decking

Insulating your roof helps complete the project's thermal envelope.



Roof Insulation Solutions

Find out more at:
unilininsulation.ie/betterhomes

XT/WALK-R

Insulated Attic Decking

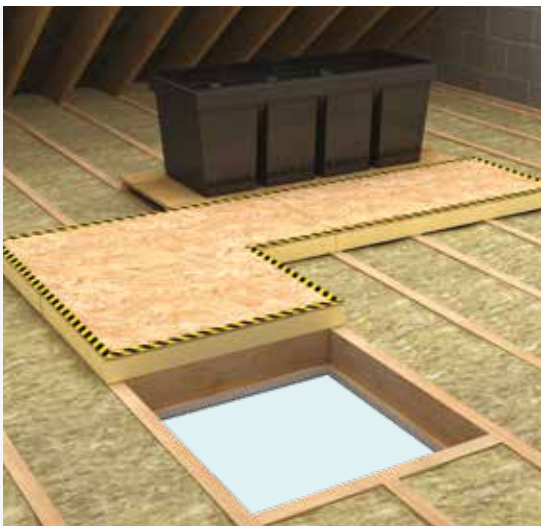
Thin-R Walk-R is a composite PIR insulation with tough OSB board that provides safe access into insulated roof spaces. Walk-R maintains very high insulation values and complies with health and safety guidelines.

BENEFITS

- Provides safe access to water tank
- Lightweight

MOSTLY USED WHEN

- When access to utilities is required



RAFTERLOC

Variable Width Pitched Roof Board

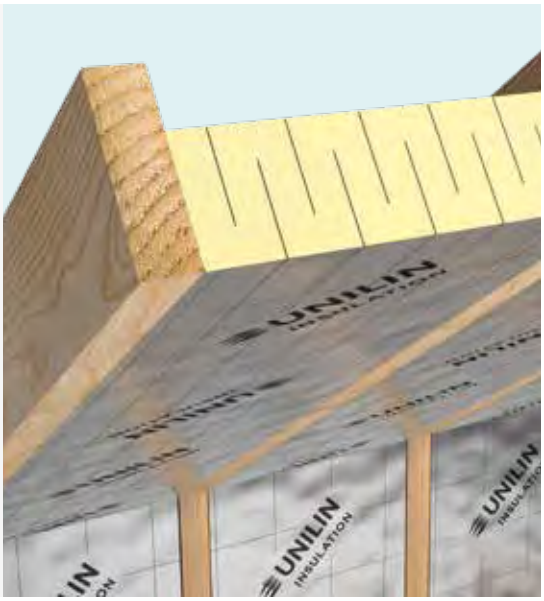
Unilin Rafterloc Pitched Roof Insulation has a unique width variation feature offering a 20-30mm adjustment margin to ensure a tight fitting, insulation locked between rafters.

BENEFITS

- Variable width feature
- Composite foil facings
- Minimal intrusion into living area

MOSTLY USED WHEN

- Renovating older buildings where there may be inconsistencies in rafter centres



XT/PR_UF (ROOFS)

Pitched Roof

Thin-R Pitched Roof on sloped roofs (ventilated, hybrid or warm) provides efficient U-Values with minimal intrusion into valuable living space. The roof construction is a critical element in the building fabric and is an area at high risk of heat loss.

BENEFITS

- Reduces Intrusion into living area
- Lightweight
- Reduces the risk of condensation

MOSTLY USED WHEN

- Optimum thermal performance is a consideration



Roof Insulation Solutions

Find out more at:
unilininsulation.ie/betterhomes

XO/PR

Pitched Roof

XtroLiner Pitched Roof on sloped roofs (ventilated, hybrid or warm) provides efficient U-Values with minimal intrusion into valuable living space. The roof construction is a critical element in the building fabric and is an area at high risk of heat loss.

BENEFITS

- Reduces Intrusion into living area
- Reduces the risk of condensation

MOSTLY USED WHEN

- Optimum thermal performance is a consideration



FR/ALU

Mechanically Fixed

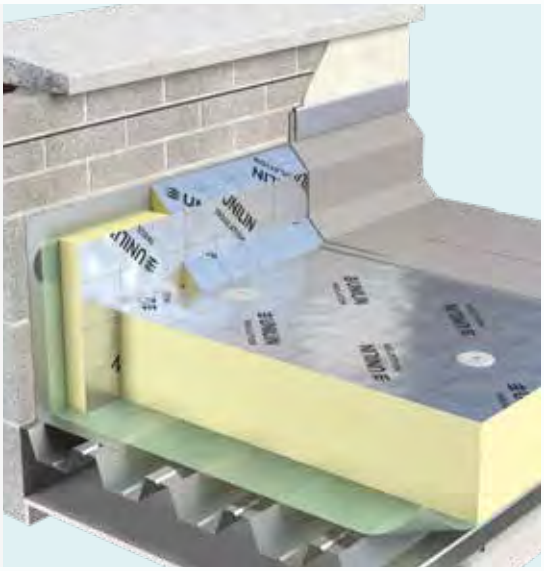
Flat Roof ALU is a high performance Polyisocyanurate flat roof insulation with vapour-tight aluminium foil facings suitable for use with single ply membranes.

BENEFITS

- Compatible with mechanically fixed single ply systems and loose laid ballasted systems
- Vapour resistant foil facers

MOSTLY USED WHEN

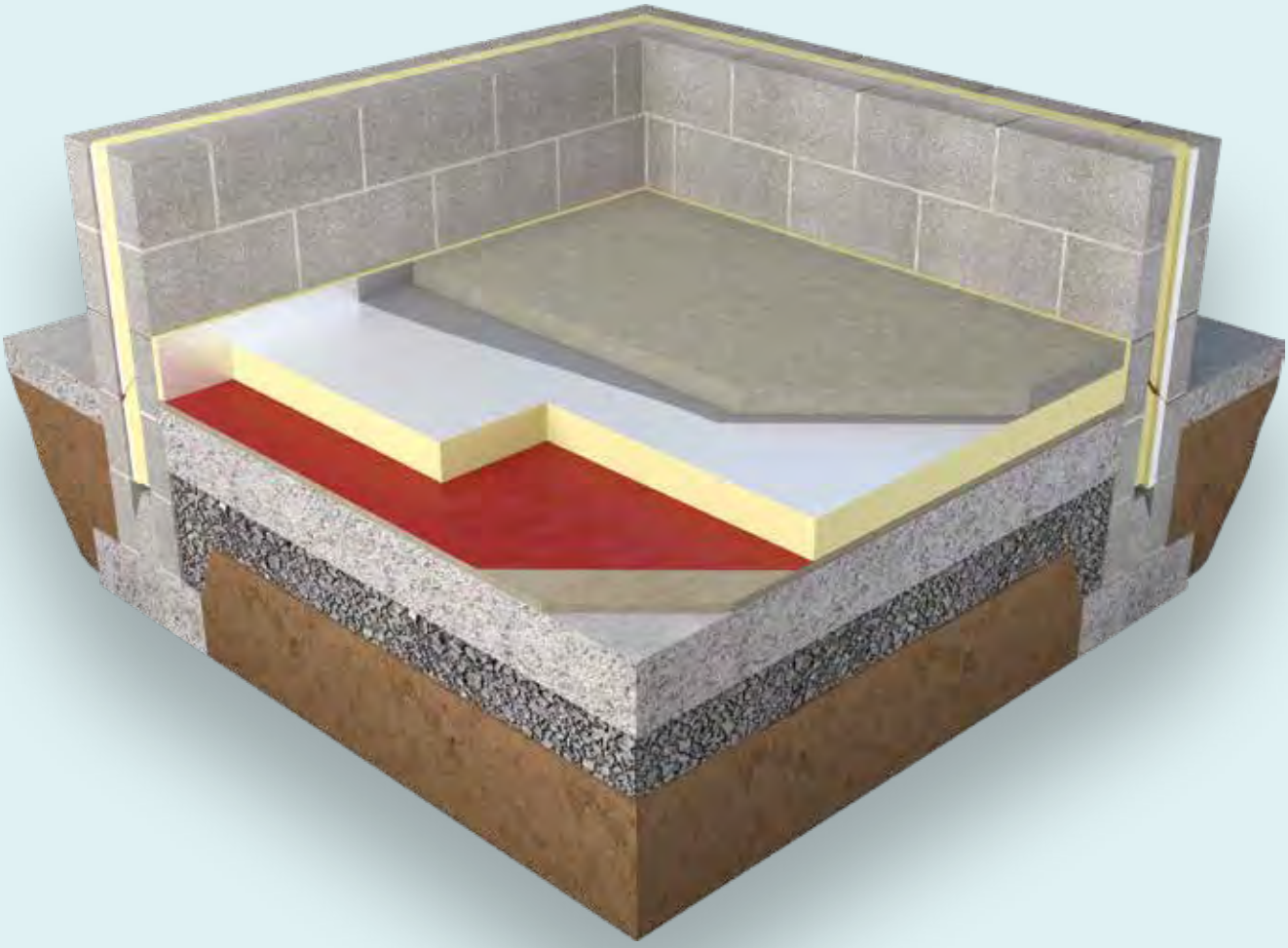
- When renovation projects require a Flat Roof section



Floors

Solid & Suspended Floors

The floor in any building is an area of considerable downward heat loss when not properly insulated. Correctly insulating your floors can help prevent moisture problems and mould growth.



Floor Insulation Solutions

Find out more at:
unilininsulation.ie/betterhomes

XT/PR_UF (FLOORS)

Ground Supported & Suspended Floors

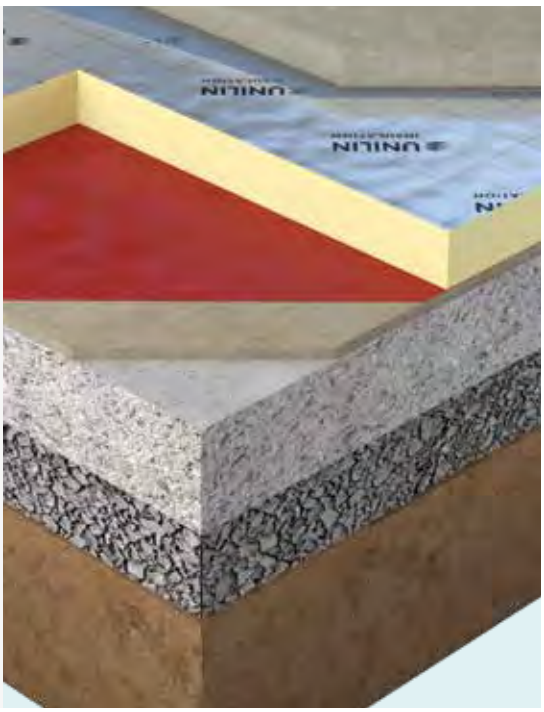
Thin-R Underfloor is a lightweight PIR insulation which provides a solution for lowering U-Values in commercial and residential developments.

BENEFITS

- Suitable for underfloor heating
- Perimeter strips for robust detailing
- Reduced insulation thickness

MOSTLY USED WHEN

- When aiming to upgrade the thermal efficiency of your home



XO/UF

Solid & Suspended Floors

XtroLiner Underfloor superior performance* PIR offers excellent insulation performance with a thermal conductivity of 0.021 W/mK.

XtroLiner Underfloor is designed to improve the U-Value of new and existing floors. It is a lightweight, superior performing* PIR insulation which offers a certified solution for floor applications.

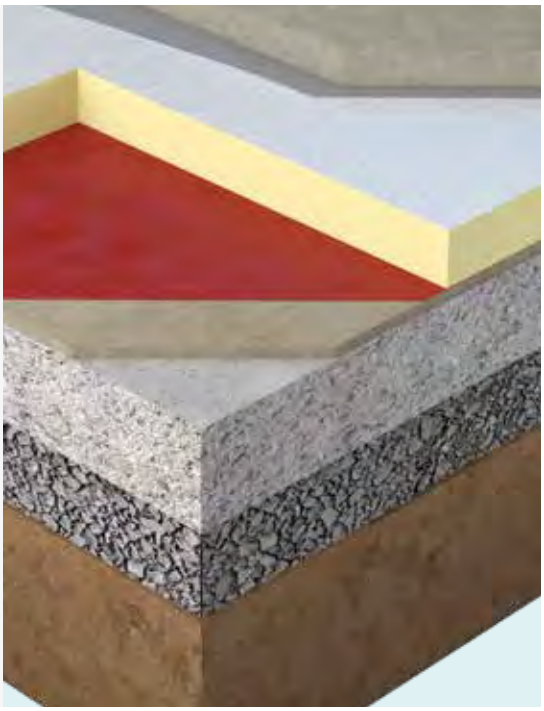
*The reference to superior performance relates to the product or ranges thermal conductivity or fire performance or a combination of both, when compared to our Thin-R range.

BENEFITS

- Suitable for underfloor heating
- Perimeter strips for robust detailing
- Reduced insulation thickness

MOSTLY USED WHEN

- A higher standard thermal performance is required





Expect more Knowledge

With unrivalled knowledge and expertise, our technical team is on hand to advise you of the most suitable insulation solutions for your renovation project.

Talk to our technical experts.

FREE
One-to-one advice

Get in touch

T: 046 906 6050 **E:** tech.ui@unilin.com

unilininsulation.ie

Renovation Case Study

Victorian House



The selection of Unilin Insulation products ensured improved thermal performance and enhanced indoor air quality, while meeting the project's stringent standards for sustainability and comfort.

Purchased back in 2017, this Dublin building had previously been split into four bed sits. The house needed structural changes and rising damp was also an issue. Architect Brendan O'Connor devised the concept of encasing the old brick structure within a timber framed house.

According to the owner "I've always believed that if you have to do the right thing, even if it's hard, then you still do it and I knew I'd never have a second chance to get it right".

There were various challenges on the project including the search for a responsible way to deal with ventilation and airtightness. Significant structural changes were needed with everything removed except the stairs, three walls and the upstairs floorboards. The floors had Unilin Insulation's XT/PR UF floor insulation installed along with membranes and damp proof courses along with the construction of a timber frame to encase the existing building.



The contractors rebuilt the side back wall to allow for the cantilever to support the corner unit and constructed a cavity wall extension with Unilin Insulation's CavityTherm full-fill insulation system. The house has triple glazed windows and two wood-burning stoves.

The build followed passive house principles resulting in an improvement in the building energy rating (BER) from a G (before the build) which jumped to an A3.



Product Specification:
Floors: XT/PR_UF for flooring

Walls: Cavitytherm full fill cavity wall insulation

Roof: XT/PR_UF roof insulation

Location:
Phibsborough, Co. Dublin

Client:
Private Homeowner

Contractor:
Doyson Construction

Architect:
Brendan O'Connor

Originally featured in Passive House magazine 2021. Images: @PaulTierney Photography

Meet the team who can help with your project

Achieve your renovation dream

Whether you are thinking of upgrading part, or all of your home insulation, our technical experts are here to advise you on the best insulation approach for you and your home.

Free One-to-One advice

At Unilin Insulation, we recognise that insulation is key to maximising the benefits of all other energy improvement products that you plan on upgrading as part of your home renovation.

Our technical team are on hand to provide free one-to-one advice, guiding you through your insulation journey.

With a solution for every application and budget, our aim is to share our knowledge and expertise - helping you achieve your renovation dream.

Services

- Free Consultation Service with Unilin Technical expert
- U-value Calculations/ Condensation Risk Analysis
- Off plan BER/SAP Calculation consultation service*
- Fabric performance specifications to achieve 'A' rated building
- Pre-design assessment of details & Y-value performance
- Pre tender Unilin Insulation spec check
- Prompt response – all project sizes
- Installation Training
- Installation validation process with install team

* in conjunction with your BER assessor

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Mark Magennis
Technical Services Manager



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