SCSI
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SPRAY FOAM INSULATION: A CLEAR, IMPARTIAL GUIDE

Consumer Guide

RICS®

June 2026

Acknowledgements

This document was prepared by the SCSI Building Surveying Professional Committee under the direction of an assigned expert group. This document was adapted using the RICS Consumer Guide "Spray Foam Insulation – A clear impartial guide" published in March 2023.

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SCSI Spray Foam Consumer Guidance Expert Group
Andrew Ramsey, FSCSI FRICS
Adam Kane, BSc. (Hons) Building Surveying
Aodhán King, MSCSI MRICS
Colm McKenna, MSCSI MRICS
Pat Nestor, MSCSI MRICS
Sean Oragano, MSCSI MRICS

SCSI Editorial Support
Neha Kamrani, SCSI

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INTRODUCTION

This Consumer Guide has been prepared by the Society of Chartered Surveyors Ireland (SCSI) to help homeowners understand the benefits and risks of spray foam insulation. It explains what spray foam is, where it is commonly used, and the key considerations before deciding to install it in your home.

Spray foam insulation can improve energy efficiency, but it also introduces potential issues that may affect ventilation, moisture control, fire safety, and even property value. This guide sets out impartial advice so you can make an informed decision and avoid costly mistakes.

The information provided is general in nature and applies to existing homes in Ireland where spray foam is being considered for attic spaces. It does not cover new-build homes or attic conversions designed with integrated insulation systems. Every property is different, so professional advice should always be sought before making changes.

SCSI recommends engaging an independent Chartered Building Surveyor to assess your property before installation. This ensures that your roof is suitable, that any hidden problems are identified, and that the work complies with Irish building regulations and technical standards.

This Consumer Guide has been prepared by a team of surveyors with experience in building inspections, energy efficiency, and modern insulation materials. A full list of contributors is provided in the **acknowledgements** section.

Use of this consumer guide

Spray Polyurethane Foam (SPF), hereinafter referred to as 'spray foam, ' is a form of insulation material that can be applied to roof spaces, walls and floors. It is installed by spray gun application, applying a thin layer of chemical which expands rapidly.

Spray foam insulation may seem like a simple way to reduce heat loss in your home, but it should be considered a significant modification/material alteration. This consumer guide informs the homeowner on how spray foam insulation could impact a property and provides suggested alternatives, which a homeowner or specifier may decide are more appropriate.

This consumer guide applies to alterations and modifications of **existing roof structures** in attic voids where homeowners are considering applying spray foam retrospectively to the underside of their roofs.

This consumer guide **does not** apply to new-build structures where spray foam insulation was included when the homes were built and is original to the build-up of the roof structure and system, or attic conversions where new insulation has been designed and installed to be compatible with the conversion from the attic void to a liveable room.

BEFORE YOU INSTALL SPRAY FOAM: KEY RISKS AND WHOLE-PROPERTY CONSIDERATIONS

Many homeowners consider spray foam insulation to improve energy efficiency and reduce heating costs. While this can seem like a simple upgrade, it is a significant alteration to your property and must be approached with care.

First, think about your energy goals and proposed use and whether spray foam is the best solution. In many cases, topping up existing mineral wool insulation at ceiling level can achieve similar thermal improvements at a lower cost and with fewer risks. Spray foam changes how your roof performs, so it should never be treated as a quick fix.

Your roof must be in good condition before any insulation work begins. If it is not wind and watertight, adding spray foam can trap moisture and accelerate the deterioration of timber structures. A poorly maintained roof combined with spray foam can lead to serious problems that are expensive to repair.

Insulation affects the whole property, not just the attic. Roof spaces are designed to allow ventilation and manage moisture. Blocking airflow can cause condensation, timber decay, and hidden leaks. Once spray foam is applied, the roof structure is largely concealed, making future inspections and repairs more difficult and costly.

Extreme weather events can damage roofs. If spray foam hides a leak, water can remain undetected for months, weakening rafters and battens. Older roofs are especially vulnerable to issues such as woodworm or structural defects that should be identified before any insulation is installed.

Consumer Tip: Always have an independent Chartered Building Surveyor inspect your roof before installing spray foam. This ensures hidden problems are identified and helps you make an informed decision about whether spray foam is suitable for your home.

EXISTING CONDITION AND BUILDING SURVEY

There are various types of spray foam with distinct performance properties, and once applied, they are not easily reversible. Before installing spray foam insulation, it is strongly advised that an independent inspection be conducted by a Chartered Building Surveyor. They will examine the roof condition to confirm there are no underlying issues that could be hidden by the spray foam. During this inspection, the surveyor will look for the following issues:

- The condition of the roof coverings, including any signs of damp ingress resulting from cracked and faulty roof coverings, including valley gutters.
- The condition of the sarking felt, including whether there are any tears, and whether it is properly dressed into the guttering.
- Decay or woodworm infestation in the timber structure.
- Structural stability of the roof structure, such as adequate collar ties, strapping to a gable wall, etc.
- The condition of the party walls (shared neighbour walls).
- Check the condition of the chimney breast and ensure that the flues have not been compromised or are not suffering from excessive damp ingress.
- The condition of electrical wiring within the roof space (electrical wiring should not be covered with spray foam, as this could create a fire hazard).
- Evaluating ventilation in the roof void to confirm it is sufficient and unobstructed.
- The condition of the cold water storage tank should be examined to ensure it is adequately supported, well-insulated, and covered with a fitted lid to prevent contamination of the water supply.

Consumer Tip: Why this matters? If left undetected, serious damage can occur and result in increasing costs to repair or further deterioration to the building.

SCSI therefore advises consumers to conduct appropriate checks on the material and its properties, and to be aware of the risks involved by using independent experts who are commercially and independently separated from the installer and manufacturer.

Energy saving

Before introducing spray foam, a qualified professional must conduct thermal calculations and condensation risk checks after surveying all parts of the roof. Homeowners should keep this documentation for future reference. Some calculations may indicate that the mineral wool insulation above the ceiling needs to be removed; that is, it may not be possible to have both ceiling and roof-level insulation.

Removing existing insulation from above the ceiling and changing its position within the rafters (directly under the roof covering) of a building will create a heating requirement for the attic space, which previously wasn't required. Having to heat this additional attic space may require more heating/energy than a property that is well-insulated at the ceiling level, as you must heat the attic space before heat is retained in the living space below. With some attic spaces being relatively large, such as in a bungalow, this approach may not be cost-effective.

There is a risk that energy-saving claims may not be realised if installations are not planned correctly. Spray foam insulation is a better thermal insulator than an equal thickness of standard mineral wool attic insulation. However, existing attic mineral wool insulation can be topped up to meet modern standards of current building regulations, resulting in better thermal performance than the typical maximum of 100mm of spray foam installed between the sloping roof timbers (rafters). (See Table 1 on Insulation Comparison Matrix).

Topping up the existing mineral wool insulation is likely to be significantly cheaper than installing spray foam; however, it occupies more attic space.

Moisture and Ventilation Risks

Proper ventilation in your attic is essential for the health of your roof structure. Spray foam insulation, if installed incorrectly, can block airflow and trap moisture. This can lead to condensation, timber decay and long-term structural damage.

Every roof is designed to allow water vapour to escape. When this balance is disrupted, moisture can accumulate in hidden areas. Over time, this can cause rafters and battens to decay and weaken. In older properties, poor ventilation combined with spray foam can also conceal woodworm or damp problems that should have been treated before installation.

Ventilation requirements vary by product, but most Irish Agrément Certified spray foam systems require a continuous ventilation space behind the foam. This is usually achieved by installing a vent card between the rafters before spraying. The ventilation space must connect to soffit vents to allow cross-flow of air. Without this, the condensation risk increases significantly.

Incorrect installation can also lead to dampness in other parts of the property. If existing insulation is not removed or vapour control layers are omitted, moisture can migrate into the roof structure. These issues are difficult to detect once the foam is in place and can result in costly repairs.

Consumer Tip: Always confirm that your installer follows the ventilation requirements set out in the Irish Agrément Certificate for the product. If you are unsure, seek advice from an independent Chartered Building Surveyor before work begins.

Further installation considerations:

- Most insulation products should not be applied directly to the back of tiles or slates, nor should they be used to remedy leaks or damage.
- Some products must not be applied to waterproof roof underlays, such as bitumen sarking felts and unventilated plastic sheets, because they do not allow water vapour to pass through. Therefore, these materials require ventilation to remove moisture and condensation. These roof underlay materials are placed under the roof tiles and above the structural frame of the roof.
- Some products must not be installed against roof underlays and must have a dedicated ventilation channel installed behind the foam to control the risk of condensation.
- Metal Corrosion Risk: Care must be taken to avoid direct contact between spray foam insulation and zinc galvanised metal components such as straps, fixings or connector plates of roof trusses. Spray foam can trap moisture against metal surfaces, and chemical reactions may accelerate corrosion of zinc coatings, compromising integrity over time.
- You will need documentation that demonstrates the system was designed and installed according to the manufacturer's guidance, especially if a warranty is provided only for the insulation material and not for the installation workmanship and design.
- Difficult and Costly Removal: Once installed, especially closed-cell foam that bonds strongly to surfaces, removal is very challenging and costly, and can risk further damage to the roof structure. Removal costs can vary from thousands to tens of thousands of euros if a full roof replacement is necessary.

Protected and traditionally built buildings

As spray foam is a permanent installation, its removal could potentially damage the existing structure. Spray foam insulation must not be installed in a protected structure without prior consent from your local authority.

Reversibility is a key concept in Building Conservation, and ultimately the long-term protection and/or survival of a protected or traditionally built building. While positive that continued use of the building is enabled by improved thermal efficiency, the principle of reversibility should be applied to allow for removal of the application without unduly causing damage to the material elements of the structure. This allows for future improvements, or corrections as knowledge and technologies advance.

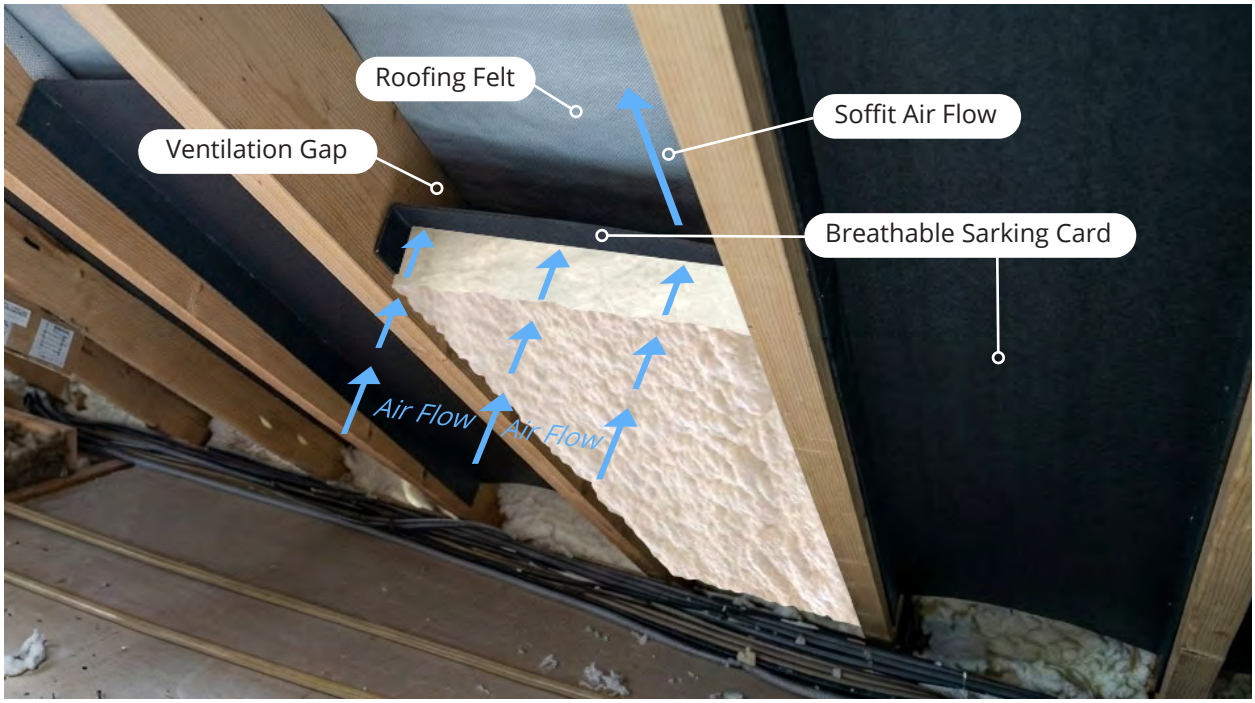
Traditional buildings, typically pre 1945 solid wall masonry with cut timber roofs; require particular care when considering spray foam insulation. These structures depend on good ventilation and "breathability" to maintain healthy indoor conditions and long term structural integrity. Professional advice from a suitably qualified expert, such as a chartered building surveyor, should always be sought before carrying out work on traditional or protected buildings.[1]

[1]*DoE guidance paper on Traditionally Build Buildings provides direction on this: https://assets.gov.ie/static/documents/improving-energy-efficiency-in-traditional-buildings-guidance-for-specifiers-and-insta.pdf

SPRAY FOAM APPLICATION

Application of Spray foam insulation

Spray foam insulation is applied by professionals who spray a two-component mixture onto surfaces, which then expands and creates an airtight seal. This process can be used in various areas of a building, including attics, walls, floors, and roofs, providing excellent thermal and air barrier insulation. It's particularly effective in areas where traditional insulation materials may not reach, like tight spaces and irregular surfaces.



Research the product

SCSI encourages and emphasises the importance of homeowners carefully researching insulation products, as they would with any modifications to their home (See **Table 1**). Consider how improvements can be made throughout the house rather than just to single parts.

Table 1: SCSI Insulation Comparison Matrix

Type	Material	Depth for U ≈ 0.18 W/m²K	Fire Protection	Health Considerations	Lifecycle Notes	Estimated Cost €/m² (Supply + Install) (as of 2026)	Relative Cost Scale (€)	Notes
Petrochemical	EPS	240-260 mm	Combustible, required fire-retardant treatment	VOC release risk	Difficult to recycle	€55 - €85	€€	Moderate cost, but poor sustainability
Petrochemical	EPS/XPS	140–180 mm	Higly combus-tible, required fire-retardant treatment	VOC release risk	Difficult to recycle	€55 - €85	€€	Moderate cost, but poor sustainability
Petrochemical	PIR/PUR	100–140 mm	Fire-resistant but degrades	Off-gassing risk	Limited recycling	€60 - €100	€€–€€€	Efficient at thin depths, mid-high cost
Petrochemical	Phenolic Foam Boards	110–130 mm	Fire-resistant	Low VOC	Moderate recyclability	€80 - €120	€€€	Premium rigid board, higher cost
Mineral	Stone Wool	200–220 mm	Non-combustible	Non-toxic	Fully recyclable	€60 - €90	€€	Slightly higher but durable and fire-safe
Mineral	Glass Wool	180–220 mm	Non-combustible	Skin/lung irritant	Often landfilled	€50 - €80	€	Widely available, low upfront cost
Natural	Sheep's Wool	200–240 mm	Naturally fire-resistant	Non-toxic, hypoallergenic	Renewable, biodegradable	€70 - €110	€€	Breathable, healthy, but pricier
Natural	Cotton	200–220 mm	Fire-retardant treated	Low VOC, safe indoors	Recycled textiles	€60 - €100	€€	Similar to wool, recycled textiles
Natural	Hemp	200–220 mm	Naturally fire-resistant	Non-toxic, mould-resistant	Renewable, biodegradable	€80 - €120	€€€	Sustainable but higher supply cost
Natural	Cellulose	200–220 mm	Fire-retardant treated	Dust release during install	Recycled paper	€50 - €80	€	Cheapest natural option, recycled paper
Natural	Wood Fibre	220–240 mm	Slows fire spread	Dust handling required	Renewable, recyclable, high thermal mass	€90 - €130	€€€	High thermal mass, premium natural board
Composite	Aerogel	70–100 mm	Non-combustible	Dust release	High energy production	€250 - €350	€€€€	Ultra-thin, specialist, prohibitively expensive

If you have decided that installing spray foam insulation is right for you and your home, it should be designed and applied by an approved installer trained by the manufacturer, in accordance with the manufacturer's recommended installation method, while ensuring compliance with the appropriate guarantees, and the product used must hold a valid NSAI (National Standards Authority of Ireland) Agrément Certificate.

Record keeping

It is essential that appropriate records and photographs are taken of your home before, during, and after works are completed. For example, document the condition of the roof covering and structure, provisions for ventilation, moisture readings taken of the roof timbers, and atmospheric moisture conditions. Such records may be required in the future to show compliance and to assist you, should you decide to sell or remortgage the property.

In a domestic contract situation, the designer should consider the duties under the Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021 (S.I. No. 528/2021).

If an installer or contractor is unfamiliar with the requirements under the Health & Safety Regulations, it signals that they are not a competent installer.

Health Risks During Installation

Spray foam insulation can release chemicals during installation that may affect health. These include isocyanates, which can cause respiratory irritation, asthma, and skin or eye problems. The area should typically be vacated for at least 24 hours after application to allow fumes to dissipate.

Improper installation increases these risks. Incorrect chemical ratios or poor preparation can lead to ongoing off-gassing and unpleasant odours, which may indicate incomplete curing. This can cause long-term health concerns and may require costly remedial work.

Signs of poor installation include:

- Persistent chemical smells
- Discoloured foam such as brown, yellow or black patches
- Soft or spongy areas instead of firm cured foam
- Visible gaps or shrinkage

If you notice these issues, seek professional advice immediately.

Consumer Tip: Always use an installer trained and approved by the manufacturer, and ensure the product holds a valid Irish Agrément Certificate. If in doubt, consult an independent Chartered Building Surveyor.

Fire safety

Polyurethane spray foam insulation is a combustible material.[2] When it burns, it may release harmful gases such as carbon monoxide and hydrogen cyanide, which can make a fire significantly more dangerous. Adding spray foam insulation to your attic increases the amount of material that can burn, so if a fire occurs, it can spread more rapidly and cause more damage to your home and neighbouring properties.

[2] Combustibility of building materials are classified using IS EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests and spray foam is typically classified as Class E

Key Risks:
- Spray foam is combustible; it will ignite and keep burning if exposed to flames.
- Burning polyurethane foam can produce toxic smoke, which is hazardous to health.
- More combustible material means a higher fire load, which increases the intensity of a fire.

How to Reduce the Risk:
- Only use spray foam products that carry an Irish Agrément Certificate or equivalent certification.
- Ensure the product is installed in accordance with the certificate and the manufacturer's recommendations. These documents will outline important precautions and restrictions.
- Before work starts, ask the installer how the work will comply with the requirements of Part B (Fire Safety) of the Building Regulations.
- Have a registered electrical contractor check your attic wiring and confirm that cables are kept clear of spray foam.
- If in doubt, engage professional advice.

Consumer Tip: Spray foam may improve thermal performance, but it introduces significant fire hazards that must be managed through proper design, use of certified products and professional installation.

Spray Foam Insulation: Impact on Value and What to Do if it is Already Installed.

Spray foam insulation can influence a surveyor's professional opinion of value. If encountered during inspection, surveyors may request an independent specialist report, which could affect valuation. Incorrect installation or use in a protected structure without consent may negatively impact value.

Key Risks:
- Mortgage refusals or delays
- Property devaluation
- Invalidated warranties or insurance

What You Can Do:
- Gather documentation: Irish Agrément Certificate, installation details, guarantees, and photographs
- Arrange an independent inspection by a Chartered Building Surveyor
- Check electrical safety with a registered electrical contractor
- Keep records for future sale or remortgage
- If selling, prepare for lender queries and provide evidence of compliance

Consumer Tip: Whether you have full paperwork or none, taking these steps may protect your home, safety, and property value.

DOS AND DON'TS

Before installing spray foam insulation, consider the following:

✖ **Consider avoiding** 'cold-call' or unsolicited offers relating to spray foam installations.

✖ **Do not** install spray foam insulation in a Protected Structure without obtaining prior consent from the local authority.

✓ **Do** consider obtaining the advice of a building professional, particularly when applying to traditionally built buildings (typically pre-1945 construction).

✖ **Do not** carry out isolated alterations without careful due diligence and planning.

✓ **Do** get advice from an independent, impartial professional if you are considering alterations or modifications at your property (someone who does not have a commercial interest in selling you their product).

✓ **Do** look after and maintain your property in good repair.

✓ **Do** consider the whole property before carrying out any alterations.

✓ **Do** consider how your property is designed to perform – specifically, understand where ventilation is needed in your property.

✓ **Do** consider where you live in the building and consider installing more insulation next to your living spaces, for example, at ceiling level in the attic, to keep the heat near the rooms you live in.

✓ **Do** check with your mortgage provider whether their lender policy allows the installation of such products.

✓ **Do** check with your insurance provider whether their policy allows the installation of such products with potential increased fire risk.

✓ **Do** consider alternative natural and lower embodied carbon insulators.

DECISION TREE

Use this decision tree to identify your next steps.

Do you have spray foam in your attic space, in the roof structure, floor void, etc?

No

Are you considering retrofit insulation upgrades to make your home more energy efficient?

No

Should you reconsider this at a later stage, ensure you follow the recommendations in this guide. Instruct an SCSI member to inspect and advise on the most appropriate next steps.

Yes

Is your property a protected structure, period building or otherwise protected?

No

Follow the recommendations in this guide.

Yes

Have you obtained local authority consent?

No

Follow the information in this guide. Consult a professional to prepare an application to the Local Authority before proceeding.

Yes

Ensure you follow the guidance in the granted planning permission or exempted development declaration and follow the guidance in this guide.

Do not install spray foam insulation without local authority consent.

Consult with your local conservation officer and a suitably qualfied professional on the best course of action before installing spray foam insulation in your home.

Yes

Are you planning on selling your home soon?

Did you have the roof/floor/structure surveyed and inspected by an independent building surveyor prior to installation?

No

Do you have detailed documentation from the installer at installation stage including photographs, certification of materials installed, detailed drawings of installation, maintenance requirements etc.?

No

Instruct an SCSI member to inspect and advise on the most appropriate steps.

Yes

Keep appropriate documentation and photographs for future reference.

Be proactive with property maintenance and keep a detailed log of this on file.

Yes

Have you followed the advice of the building surveyor, and do you have appropriate documentation and photographic evidence from the installation?

No

Instruct an SCSI member to inspect and advise on the most appropriate steps.

Yes

Keep appropriate documentation and photographs for future reference.

Be proactive with property maintenance and keep a detailed log of this on file.

HOW AN SCSI MEMBER CAN HELP

SCSI provides clear, impartial, and expert advice on the issues raised in this guide. SCSI members can assist property owners in various ways. Whether you seek expert advice and a professional assessment of your issue, an opinion on costs, representation, or someone to manage a project for you, visit Check the Register to locate a SCSI member in your area.

Using the services of SCSI members provides confidence because:

- they give you clear, impartial and expert advice
- they are regulated and have strict rules of conduct to protect you, as well as holding appropriate professional indemnity insurance
- they must update their skills and knowledge throughout their careers so you can rely on their expertise
- you are further protected by SCSI's complaints service and access to independent redress.

Look for firms that are regulated by SCSI. They are easy to identify as they use 'Regulated by SCSI' on their stationery and promotional material.

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Dating back to 1895, the Society of Chartered Surveyors www.scsi.ie Ireland is the independent professional body for Chartered Surveyors working and practicing in Ireland.

Working in partnership with RICS, the pre-eminent Chartered professional body for the construction, land and property sectors around the world, the Society and RICS act in the public interest: setting and maintaining the highest standards of competence and integrity among the profession; and providing impartial, authoritative advice on key issues for business, society and governments worldwide.

Advancing standards in construction, land and property, the Chartered Surveyor professional qualification is the world's leading qualification when it comes to professional standards. In a world where more and more people, governments, banks and commercial organisations demand greater certainty of professional standards and ethics, attaining the Chartered Surveyor qualification is the recognised mark of property professionalism.

Members of the profession are typically employed in the construction, land and property markets through private practice, in central and local government, in state agencies, in academic institutions, in business organisations and in non-governmental organisations.

Members' services are diverse and can include offering strategic advice on the economics, valuation, law, technology, finance and management in all aspects of the construction, land and property industry.

All aspects of the profession, from education through to qualification and the continuing maintenance of the highest professional standards are regulated and overseen through the partnership of the Society of Chartered Surveyors Ireland and RICS, in the public interest.

This valuable partnership with RICS enables access to a worldwide network of research, experience and advice.

www.scsi.ie

Society of Chartered Surveyors Ireland,
38 Merrion Square,
Dublin 2, D02 EV61,
Ireland.

Tel: + 353 (0)1 644 5500
Email: info@scsi.ie

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