

CASE STUDY

CORKSOL

WARDIE SQUARE, EDINBURGH

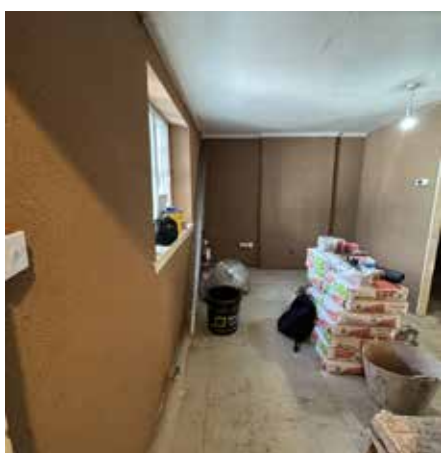


The stairwell at Wardie Square

Wheatley is Scotland's leading housing, care and property-management group and one of the UK's best-accredited organisations. With over 95,868 homes under their management or ownership, they provide their award-winning services to over 210,000 people across Scotland.

One such property in Edinburgh was in need of a suitable retrofit to ensure it was able to deliver warm and safe housing to tenants. The property, a one bed end terrace on Wardie Square, was constructed pre-1919 from solid brick. This meant that there was no insulation and the property suffered from cold. The poor heat retention also heightened the moisture risk which could lead to damp and mould, and severely impact the tenants health.

As a traditional brick built property, the building had many existing features, including sloped ceilings, uneven walls, and lots of small nooks. And, as a small terraced property, the existing rooms were tight on space.



An internal room

Wheatley needed to improve the thermal performance of the property to make it a comfortable environment for the tenant, but more traditional methods to insulate it would not suffice due to the space and shape of the rooms.

Following conversations with Wheatley, CorkSol employed RTRFIT to carry out Air Permeability testing before any interventions were in place.

CorkSol were then able to provide a solution to match

the needs of Wheatley, through our SprayCork product. By applying the product to a thickness of just 6mm and then applying a 2mm plaster skim on top, CorkSol were able to improve the air permeability by 45%.

James Erskine, Specification & Partnerships Manager at CorkSol explained, "The property was poorly insulation, which negatively impacted its energy efficiency. The client needed a solution that would be able to improve this and retain more heat. But, because of the features within the property, most solutions would only increase the risk of moisture being present, or would have a detrimental affect on the room size. With CorkSol's coating, because it is spray applied, it eliminates any chance of moisture building up behind it. And at just 6-8mm with a finished plaster skim, there was no impact on the overall room size."

Following the application of the product, RTRFIT independently tested the installed performance of SprayCork and were able to compare the results with those obtained prior to the install. Air permeability measurements were carried out at the property in April and May 2025.

The Testing

The measurements carried out by RTRFIT:

Pulse measurement of air infiltration:

This is a measurement of the air infiltration between outside and in. Air infiltration is unintended air leakage via holes, gaps and cracks in the building fabric and does not include deliberate ventilation.

The Results

Before: 15.14 m³/m²h @50Pa

After: 8.44 m³/m²h @50Pa

This represents a 45% reduction in air permeability, independently tested with no other measures in place.



To discuss your project with James, please contact him directly on 07824 318168.

Results

Air Permeability

Before

Result							
		Measured @ 4Pa			Extrapolated @ 50Pa		
		Air Leakage Rate	Q ₄	465	m ³ /h	Q ₅₀	2,239
Air Permeability	AP ₄	3.14	m ³ /m ² h	AP ₅₀	15.14	m ³ /m ² h	
Air Changes per Hour	N ₄	3.67	1/h	N ₅₀	17.66	1/h	
Equivalent Leakage Area		0.06	m ²		0.06	m ²	
Calculation Uncertainty		2.33	±%		7.39	±%	

After

Result							
		Measured @ 4Pa			Extrapolated @ 50Pa		
		Air Leakage Rate	Q ₄	247	m ³ /h	Q ₅₀	1,247
Air Permeability	AP ₄	1.67	m ³ /m ² h	AP ₅₀	8.44	m ³ /m ² h	
Air Changes per Hour	N ₄	1.95	1/h	N ₅₀	9.84	1/h	
Equivalent Leakage Area		0.03	m ²		0.03	m ²	
Calculation Uncertainty		1.04	±%		3.43	±%	

