The Installation Assurance Authority Limited
Commercial Services
Unit 3, Ouzel Industrial Area Estate
Grovebury Road
Leighton Buzzard
LU7 4ER
Tel: 03333 239045
Email: enquiries@theiaa.co.uk

6th December 2024

Client:
Deryck Woodford – The Energy Savers

Property Address:

Bronllys Hospital,
Brecon Road,
Bronllys,
Brecon Powys,
LD3 0LY

Room 3

Description	Result
Pre install air tightness test	8.03 m3/m2h @ 50Pa
Post install air tightness test	1.31 m3/m2h @ 50 Pa
Reduction	6.72 m3/m2h @ 50 Pa
Percentage Reduction	**83.69%**

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Air Permeability Test Report

PULSE

Bronllys Hospital Bronllys Brecon LD3 0LY	Room Only **Unknown**	Air Permeability @ 4Pa **1.58** m^3/m^2h
Report Date **05 December 2024**	Unique Reference **C9FFA830-0ED1-49E2-8BC9-2AC6BC6DA0A9**	

Test Date	05 Dec 2024 - 10:02	**Test Method**	Low Pressure Pulse
Test Reference	Bronllys hospital room 3 ap		
Lifecycle / Purpose	Retrofit Project (PAS 2035) – Regulation Compliance		
Airtightness Standard	CIBSE TM23 (LPP)		
Building Info	Commercial Premise / Band C (1930-1949)		
Openings Preparation	-	**Envelope Area**	73.8 m^2
Ventilation Preparation	-	**Volume**	42.5 m^3
Geometry Source	-		

Result

		Measured @ 4Pa			Extrapolated @ 50Pa	
Air Leakage Rate	Q_4	117	m^3/h	Q_{50}	592	m^3/h
Air Permeability	AP_4	1.58	m^3/m^2h	AP_{50}	8.03	m^3/m^2h
Air Changes per Hour	N_4	2.75	1/h	N_{50}	13.95	1/h
Equivalent Leakage Area		0.01	m^2		0.01	m^2
Calculation Uncertainty		0.16	±%		0.69	±%

Test Status	Valid				
Equipment	Pulse V2	**Number of ARs**	1	**Intitial Pressure**	7.0 bar
Pulse Duration	1.5 secs	**Number of Steps**	2	**Steps Used**	1, 2

Calculation Details

Achieved Pressure Range	2.9 - 15.8 Pa
Correlation (r^2) *	0.9994
Air Flow Exponent (n) *	0.55 ±0.00
Air Flow Coefficient (C_{ENV})	54.523
Air Leakage Coefficient (C_L)	54.421

* For a test to be valid, the correlation must be at least 0.96 and the air flow exponent must be between 0.5 and 1.

Test Conditions

Barometric Pressure	1,013.3 mbar
Internal Temperature	21.0 °C
External Temperature *	10.0 °C
Wind Speed *	6.0 m/s
Weather *	Overcast clouds

* Weather observations provided for reference only and based on closest weather station and nearest hourly record.

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Installation Assurance Authority CS
Right first time

Air Permeability Test Report

PULSE

Bronllys Hospital Bronllys Brecon LD3 0LY	Room Only **Unknown**	Air Permeability @ 4Pa **0.22** m^3/m^2h
Report Date **05 December 2024**	Unique Reference **2763D2D1-73E6-4904-A10C-074716970090**	

Test Date	05 Dec 2024 - 12:33	**Test Method**	Low Pressure Pulse
Test Reference	Bronllys hospital room 3 ap post		
Lifecycle / Purpose	Retrofit Project (PAS 2035) – Regulation Compliance		
Airtightness Standard	CIBSE TM23 (LPP)		
Building Info	Commercial Premise / Band C (1930-1949)		
Openings Preparation	-	**Envelope Area**	73.8 m^2
Ventilation Preparation	-	**Volume**	42.5 m^3
Geometry Source	-		

Result

		Measured @ 4Pa			Extrapolated @ 50Pa	
Air Leakage Rate	Q_4	16	m^3/h	Q_{50}	97	m^3/h
Air Permeability	AP_4	0.22	m^3/m^2h	AP_{50}	1.31	m^3/m^2h
Air Changes per Hour	N_4	0.39	1/h	N_{50}	2.28	1/h
Equivalent Leakage Area		0.00	m^2		0.00	m^2
Calculation Uncertainty		1.00	±%		2.55	±%

Test Status	Valid				
Equipment	Pulse V2	**Number of ARs**	1	**Intitial Pressure**	1.5 bar
Pulse Duration	1.5 secs	**Number of Steps**	2	**Steps Used**	1, 2

Calculation Details

Achieved Pressure Range	0.6 - 8.1 Pa
Correlation (r^2) *	0.9993
Air Flow Exponent (n) *	0.86 ±0.01
Air Flow Coefficient (C_{ENV})	5.020
Air Leakage Coefficient (C_L)	5.022

* For a test to be valid, the correlation must be at least 0.96 and the air flow exponent must be between 0.5 and 1.

Test Conditions

Barometric Pressure	1,013.3 mbar
Internal Temperature	19.8 °C
External Temperature *	11.1 °C
Wind Speed *	6.8 m/s
Weather *	Light rain

* Weather observations provided for reference only and based on closest weather station and nearest hourly record.