

26a Prospect Street, Caversham

Air Tightness Testing Report

for

Mclure Fisher Family Pension

06.02.2024

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Melin Consultants are accredited to provide a range of calculation, assessment and testing services. They are members of CIBSE Low Carbon Consultants.

Melin Consultants fully check all work prior to completion and a robust audit trail exists to demonstrate accountability.

All information within this document is based on evidence provided in the form of drawings and specifications.

CPD (Continual Professional Development) records are kept and all technical staff are required to complete a minimum 20 hours per year in training activities.

Testing engineers are accredited through ATTMA (Air Tightness Testing and Measurement Association) to undertake testing to both residential and commercial buildings.

This document contains the following information:

- Air Tightness Testing Certificate and Report

Project number: 507580

Report date: 06.02.2024

Report author: Jamie Best

Function: Testing Engineer

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Building Air Leakage Test Report

26a Prospect Street
Caversham
Reading, RG4 8JG

Test Date: 11/02/2025
Report Number: 507580
Prepared for: Mclure Fisher
Test Technician: Jamie Best
ATTMA Registration: 0057

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Introduction

This report relates to the air tightness testing of the building indicated below as required under current UK Building Regulations Part L. The test and subsequent report were carried out in accordance with the required ATTMA test methodology by an engineer who is a member of the ATTMA competent person scheme.

Test procedure

The air leakage characteristics of the structure were determined in accordance with the relevant ATTMA technical standard (TSL1 issue 3 for dwellings & TSL2 issue 1 for non-dwellings), which is generally based on BS EN 13829:2001 with enhancements recommended by ATTMA.

A variety of airflow rates was used to create a subsequent pressure differential between the internal and external environment of the structure.

Calibrated test fans were used to provide the required airflow, needed for the result calculated below. The airflow and pressure differentials were constantly measured and logged with calibrated manometers.

The air temperature inside and outside the building was measured along with the external barometric pressure.

Test details

Building address	26a Prospect Street Caversham Reading, RG4 8JG
Date of construction	Refurbishment 2024
Test date	11/02/2025
Test time	11:01:00
Building preparation	Method B
Floor area, A_f	
Envelope area, A_e	250 m ²
Envelope calculation prepared by	Jamie Best

Test equipment

Device	Product	Serial no.
#1 Fan	Retrotec 3000	PH001996
#1 Manometer	DM32	400585

Openings & temporary sealing

TEMPORARY SEALS IN PLACE

extracts sealed

MASTIC SEALING STATUS

Sanitary ware only

Test results

The initial normalized air flow at a pressure differential of 50 Pa was established in accordance with the required test methodology of ATTMA TSL1.

The key leakage characteristics of the building were calculated as follows:

Air Flow at 50 Pa, Q_{50}	1784.5 m ³ /h
Air Permeability at 50 Pa, AP_{50}	7.139 m³.h⁻¹.m⁻²
Correlation Coefficient, r^2	99.561
Air Flow Exponent, n	0.632
Air Flow Coefficient, C_{env}	148.357 m ³ .h ⁻¹
Air Leakage Coefficient, C_l	150.361 m ³ .h ⁻¹

INTERPRETATION OF RESULTS

A regression analysis has been performed to correlate the data and determine the value of the coefficient (c) and the exponent (n). The results were then corrected in accordance with ATTMA TSL1/TSL2 – Appendix A to:

- Correct the reading of the airflow-measuring device for differences between the actual test conditions and calibrated conditions.
- Correct for differences in temperature between the air passing through the airflow measuring device and air passing through the building envelope.
- Correct the airflow rates through the building for standard temperature and barometric pressure conditions (STP)

The airflow rate at a pressure differential of 50 Pa was determined and this result is expressed as an airflow rate per m² of building envelope. For more information regarding the calculations used to calculate the air permeability please contact us.

Deviations from test standard

none

Test summary

The tester was located Inside the building and the air leakage rate was checked by means of a Depressurize test, which incorporated the whole building envelope. The result attained during this test was **7.139 m³.h⁻¹.m⁻²** at an imposed pressure differential of 50 Pa.

This is below the target level of 8.00 m³/h/m², required by the carbon emission calculation.

Appendix A – Environmental readings

		Start	End
Barometric Pressure		100.700 kPa	100.700 kPa
Inside Temperature		16.2 °C	16.8 °C
Outside Temperature		8.4 °C	8.4 °C
Static Pressure	Δp+	0.00 Pa	1.20 Pa
	Δp-	-1.58 Pa	-2.08 Pa
	Δp	-1.58 Pa	-1.75 Pa

Appendix B – Test data

Start Static Pressure (Pa)	-2.21	-1.80	-1.90	-1.40	-1.40	-1.60	-0.14	-2.60	-0.30	-2.40
End Static Pressure (Pa)	-2.20	-2.10	-2.50	-2.80	-2.60	-1.50	-1.40	1.20	-1.30	-2.30
Building Pressure (Pa)	-25.5	-30.0	-34.7	-40.0	-45.0	-50.5	-55.0	-60.0	-64.9	
Flow Pressure (Pa)										
#1, Range C8	64.7	83.0	105.0	128.0	145.0	163.0	186.0	209.0	223.0	
Total Flow Q _r (m ³ /h)	1120.88	1270.08	1429.09	1578.40	1680.30	1781.90	1903.90	2018.58	2085.33	
Corrected Flow Q _{en} (m ³ /h)	1080.77	1224.63	1377.96	1521.92	1620.18	1718.14	1835.77	1946.35	2010.70	
Error (%)	-2.0%	-0.4%	1.7%	2.2%	0.7%	-1.0%	0.1%	0.3%	-1.6%	

Certificate of Air Permeability Test



UCRN: 11630227

Test Undertaken By Jamie Best of Melin Energy Consultants

Registered Company Details

Melin Energy Consultants

Address: Park House Business Centre
10 Park Street
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Telephone: 08450 941279

Email: bristol@melinconsultants.co.uk

Registered Tester Details

Technician: Jamie Best

Registration No: 0057

Qualification:

1	2	3	PH	EA
✓	✓			

For clarification on technician qualifications please visit:
<https://www.bcta.group/attma/members/>

Building Details

Building identifier: 26a Prospect Street

Site address: 26a Prospect Street, Caversham, Reading, Berkshire, RG4 8JG

Type: Dwelling **Description:** Maisonette - Mid Floor

Construction: Traditional **Warm roof:** Yes

Size:	Footprint (m ²)	Envelope (m ²)	Volume (m ³)	Storey
	0	250	-	0

Ventilation: System 1 - Background ventilators with intermittent extractors

Primary heating: Electric **Air conditioning:** None

Mastic sealing: Sanitary Ware Only

Test Details

11/02/2025

Report reference: 507580

Retest: No **Build progress:** Completed

Data acquisition: Manual **Test type:** Whole building

Temporary sealing: extracts sealed

Deviations from Test Standard

Deviations: none

Notifications:

Test Results

Target:	<= 8.00	m³.h⁻¹.m²@50Pa	Air Permeability:
Air Flow Coefficient (C_{env}):	148.357	m³.h⁻¹.Paⁿ	7.14 m ³ .h ⁻¹ .m ² @50Pa
Air Leakage at 50 Pa (Q₅₀):	1784.706	m³.h⁻¹	
Air Flow Exponent (n):	0.63		
Coefficient of Determination (r²):	0.996		

This is to certify that the above name building has been tested by a registered provider in accordance with ATTMA TSL1, TSL2 or TSL3, subject to the above statements regarding temporary sealing and deviations from these test standards.

This certificate is a short form report. If a full compliant report is required please contact the company that issued the certificate. Enquiries about this certificate should be made to: Scheme Manager, ATTMA, Unit 3, Tannery Road, Loudwater, Buckinghamshire, HP13 7EQ or visit www.bcta.group/attma/ or email admin@bcta.group.

Pass



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ATTMA is part of the Building Compliance Testers Association (BCTA). The BCTA is a trade association for companies that conduct on-site testing and operate within controlled, audited schemes.

Enquiries should be made to: BCTA, Unit 3, Tannery Road, Loudwater, Buckinghamshire, HP13 7EQ or visit www.bcta.group or email admin@bcta.group.