



Tophouse Assessments Limited  
17 Albany Road, Chatham, Kent ME4 5DL

SAP Assessments . Air Admittance Testing  
L1A /B Building Regs.. All under one roof!

**Air Permeability Test report**      Test Reference      T2079      Date      30/03/2009

Results of the Envelope Airtightness Test Carried out on

Test Location      16 Willingham Way  
Kingston Upon Thames  
Surrey  
KT1 3JA  
United Kingdom

Dwelling Type      End-Terrace House

Carried out for      Damon Hart-Davis  
Exnet Limited  
16 Willingham Way  
Kingston Upon Thames  
Surrey  
KT1 3JA

Carried out by      Martin Gill      BINDT Registration Number = 0183  
Tophouse Assessments Limited  
17 Albany Road  
Chatham  
Kent  
ME4 5DL  
Tel 01634 566215      [martin.gill@etophouse.com](mailto:martin.gill@etophouse.com)

Design Air Permeability	<b>10.00</b>	m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 pascals
Test Result	<b>7.21</b>	m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 pascals
Area Of Dwelling	<b>204.0</b>	m <sup>2</sup>
r <sup>2</sup>	<b>0.99965</b>	
n	<b>0.728</b>	

This dwelling passes the pressure test

A test certificate Number 17265 has been issued.

Note the design Air permeability stated above was provided by the client and has not been verified.

Please refer to the accompanying notes



Tophouse Assessments Limited  
17 Albany Road, Chatham, Kent ME4 5DL

SAP Assessments . Air Admittance Testing  
L1A /B Building Regs.. All under one roof!

#### Air Permeability test : Additional Notes

Dwelling: 16 Willingham Way	Test Ref: T2079	Design: 10.0
Kingston Upon Thames		Result: <b>7.21</b>
Surrey	date: 30/03/2009	Result Pass
KT1 3JA	method : B	r <sup>2</sup> 0.99965
United Kingdom	Units m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 pascals	n = 0.728
	Cenv = 84.7	CL = 85.4
	V50 = 1471	

This report is presented to provide the results of the air permeability test carried out at the above dwelling in order to determine compliance with approved document L1A of the Building Regulations.

The measured air permeability of the dwelling was 7.21 m<sup>3</sup>/(h.m<sup>2</sup>) at a test pressure of 50 pascals, with no non-conformities in the dwelling setup. This dwelling passes the pressure test because the test result was less than or equal to the design air permeability provided by the client.

A test certificate Number 17265 has been issued.

#### Test conditions and equipment

Parameter			Av Positive	Av Neg	Av All
Fan off Pressures	Pa	before test	-0.1	0	-0.1
		After test	-0.8	0	-0.8
			Before test	After Test	Average
Internal Temperature	Celsius		15.5	14.7	15.1
External Temperature	Celsius		13.2	14.2	13.7
Barometric Pressure	mBar		1019.9	1020.9	1020.4
Wind speed	m/s		<1	<1	<1

Equipment Used	Serial	Expiry of Calibrator
Minneapolis Blower Door Model 3	13859	07/01/2010
Micro-manometer DG700	9326.6.700	04/01/2010
Druik DPI705 Barometer	70543568	05/01/2010
Temperature Probes	33915239/706	07/01/2010
Wind Speed Anemometer ANEMO		N/A
Energy Conservatory Softwar	3.6.7.0	N/A

Heating : nat gas combi radiators

Air Conditioning : not present

Ventilation natural passive ventilation

Test Notes refer to comments attached  
refer to notes attached

The test procedure was carried out in accordance with the requirements of ATTMA Technical standard 1 and the BINDT Quality Procedure

# BUILDING LEAKAGE TEST

Date of Test: 30/04/2009  
Test File: T2079 Hart Davis kingston

Technician: Martin Gill

Customer: Damon Hart-Davis  
16 Willingham Way  
Kingston Upon Thames  
Surrey, KT1 3JA  
Phone: 07771597055  
Fax: 02082965555

Building Address: 16  
Willingham Way  
Kingston Upon Thames, Surrey KT1 3JA

## Test Results at 50 Pascals:

V50: Airflow (m<sup>3</sup>/h) 1471 ( +/- 0.2 %)  
n50: Air Changes per Hour (1/h)  
w50:  
q50: m<sup>3</sup>/(h\*m<sup>2</sup> Surface Area) 7.21

## Leakage Areas:

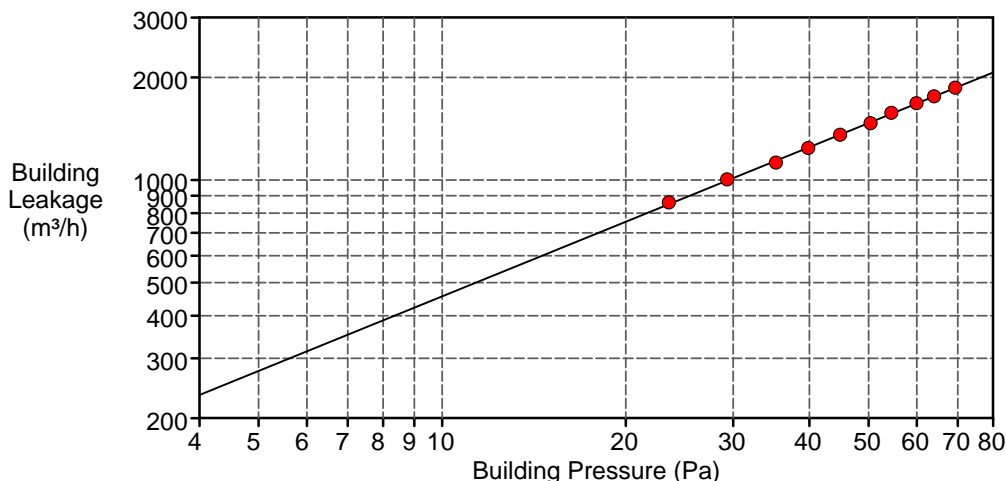
508.8 cm<sup>2</sup> ( +/- 1.1 %) Canadian EqLA @ 10 Pa or 2.49 cm<sup>2</sup>/m<sup>2</sup> Surface Area  
252.0 cm<sup>2</sup> ( +/- 1.7 %) LBL ELA @ 4 Pa or 1.24 cm<sup>2</sup>/m<sup>2</sup> Surface Area

## Building Leakage Curve:

Air Flow Coefficient (Cenv) = 84.7 ( +/- 2.7 %)  
Air Leakage Coefficient (CL) = 85.4 ( +/- 2.7 %)  
Exponent (n) = 0.728 ( +/- 0.007 )  
Correlation Coefficient = 0.99965

Test Standard: EN 13829 Test Mode: Depressurization  
Type of Test Method: B Regulation complied with: L1A  
Equipment: Model 3 Minneapolis Blower Door, S/N 13859

Inside Temperature:	15 °C	Volume:	
Outside Temperature:	14 °C	Surface Area:	204 m <sup>2</sup>
Barometric Pressure:	102040 Pa	Floor Area:	
Wind Class:	0 Calm	Uncertainty of	
Building Wind Exposure:	Partly Exposed Building	Building Dimensions:	%
Type of Heating:	gas radiators	Year of Construction:	1968
Type of Air Conditioning:	None		
Type of Ventilation:	Natural		



## BUILDING LEAKAGE TEST Page 2

Date of Test: 30/04/2009 Test File: T2079 Hart Davis kingston

---

### Comments

checked all exterior doors and windows closed  
no trickle vents  
sealed up passive ventilation 2 grills in kitchen

Weather = fine

Other observations.

Leakage test for research puposes  
3 Bed end terrace approx 1968 timber frame house with substantial solar PV on roof

Leakage observed using smoke test  
In kitchen, under sink and through holes in Kitchen ceiling where pipework removed or altered etc  
From boxing around bath in bathroom  
Various leaks around windows particularly from back bedroom and toilet.  
Leakage under stairs and in cupboards on landing.

---

### Data Points: Depressurization

Nominal Building Pressure (Pa)	Fan Pressure (Pa)	Nominal Flow (m <sup>3</sup> /h)	Temperature Adjusted Flow (m <sup>3</sup> /h)	% Error	Fan Configuration
-0.1	n/a				
-69.8	38.5	1884	1867	0.1	Ring A
-64.5	34.3	1777	1761	0.0	Ring A
-60.4	31.2	1696	1681	0.2	Ring A
-55.0	27.4	1589	1575	0.6	Ring A
-50.8	228.4	1481	1468	-0.7	Ring B
-45.4	196.8	1371	1359	-0.1	Ring B
-40.3	165.5	1253	1242	-0.4	Ring B
-35.7	137.0	1136	1125	-1.3	Ring B
-29.8	110.1	1014	1005	0.8	Ring B
-24.0	81.6	867	860	1.2	Ring B
-0.8	n/a				

Test 1 Baseline (Pa): p01- = -0.1 p01+ = 0.0 p02- = -0.8 p02+ = 0.0