Building Air Leakage Test Results

In Compliance with European Norm EN13829

Building Details

Building Address:		Elevation:	**0 m**
Fusion Sprayfoam		Height above ground:	**0 m**
Project in Castlebaldwin		Building Volume, V:	**54 m³**
Customer Info:		Total envelope area, $A_{T\ BAT}$	**86 m²**
		Floor Area, A_F	**19 m²**
		Building exposure to wind:	**Highly exposed building**
Test technician:	**Christ**	Accuracy of measurements:	**3%**
Test company:	**Ecoscan Ltd**		

Testing Details

Fan Model: **Retrotec 2000**	Fan SN:	Gauge Model: **DM-2**	Gauge SN: **102432**

Depressurize set

Date: **2014-06-12** Time: **10:11** to **10:27**

Environmental Conditions*:*

Barometric Pressure: **101.3** KPa from **Standard temp/pressure**.

Wind speed: **2: Light breeze**

Temperature: Initial: indoors **15 °C** outdoors **15 °C**.
Final: indoors **15 °C** outdoors **15 °C**.

Test Data:

10 bias pressures taken for **10** sec each.

8 induced pressures taken for **20** sec each.

Depressurize Test Results

	Results		
Correlation, r [%]	**95.96**	95% confidence limits	
Intercept, C_{env} [$m^3/h.Pa^n$]	**20.05**	**13.20**	**30.40**
Intercept, C_L [$m^3/h.Pa^n$]	**20.274**	**13.35**	**30.75**
Slope, n	**0.4257**	**0.3010**	**0.5504**

	Results	95% confidence		Uncertainty
Air flow at 50 Pa, V_{50} [m^3/h]	**107.0**	**97.05**	**118.5**	**+/-10.0%**
Air changes at 50 Pa, n_{50} [/h]	**1.985**	**1.780**	**2.190**	**+/-10.4%**
Permeability at 50 Pa, q_{50} [$m^3/h.m^2$]	**1.246**	**1.117**	**1.376**	**+/-10.4%**
Specific Leakage at 50 Pa, w_{50} [$m^3/h.m^2$]	**5.955**	**5.335**	**6.575**	**+/-10.4%**

Current Passive House standards 0.6 Air changes @50Pa

Current Requirement - TGD part L - 2011 for new dwellings Air permeability: 7m3/hr/m2 @50Pa

Calibration Certificate

Retrotec 2000						
Range	N	K	K1	K2	K3	K4
Open(22)	**0.5214**	**519.618**	**-0.07**	**0.8**	**-0.115**	**1**
A	**0.503**	**264.996**	**-0.075**	**1**	**0**	**1**
B	**0.5**	**174.8824**	**0**	**0.3**	**0**	**1**
C8	**0.5**	**78.5**	**-0.02**	**0.5**	**0.016**	**1**
C6	**0.505**	**61.3**	**0.054**	**0.5**	**0.004**	**1**
C4	**0.5077**	**42**	**0.009**	**0.5**	**0.0009**	**1**
C2	**0.52**	**22**	**0.11**	**0.5**	**-0.001**	**1**
C1	**0.541**	**11.9239**	**0.13**	**0.4**	**-0.0014**	**1**
L4	**0.48**	**4.0995**	**0.003**	**1**	**0.0004**	**1**
L2	**0.502**	**2.0678**	**0**	**0.5**	**0.0001**	**1**
L1	**0.4925**	**1.1614**	**0.1**	**0.5**	**0.0001**	**1**