

Building Summary: Dwelling as designed

Applicable document: England & Wales L1 AD 2006 edition provisions

		Area m ²		U-value	Total heat loss W/K	
		Gross	Open			
Wall	1: Front 1	Front	18.68	4.64	0.29	10.65
	2: Side Left 1	L	4.55	0.00	0.29	1.32
	3: Front 2	Front	25.25	6.59	0.29	14.91
	4: Side Left 2	Left	36.36	1.96	0.29	12.95
	5: Rear	Back	43.94	12.33	0.29	27.23
	6: Side R	Right	40.90	0.66	0.29	12.64
Floor	1: Ground floor	N/A	66.70	0.00	0.12	8.00
Roof	1: Roof	N/A	65.97	0.00	0.14	9.05
					Total:	96.76

Breakdown by element type:

		Area	U-value	Total heat loss W/K
Wall	ADL brick/block cavity wall	143.49	0.29	41.61
Floor	User-entered U-value	66.70	0.12	8.00
Roof	Pitched roof: 300mm quilt	65.97	0.14	9.05
Window	PVCU	15.33	1.42	21.76
Door	PVCU glazed	6.93	1.50	10.39
Door	PVCU part glazed	3.93	1.50	5.89

Window U-values include curtain factor adjustment (SAP-2005 §3.2)

Average/maximum U-values: Walls: 0.29/0.29 OK; Floors: 0.12/0.12 OK
 Roofs: 0.14/0.14 OK; Openings: 1.50/1.50 OK

Floor area: 132.70m² Living area fraction: 0.14 Internal volume: 335m³

Front faces: Unspecified (all openings taken as facing E/W)

Storeys: 2 Chimneys: 0 Flues: 0 Fans: 5 Flueless gas heaters: 1 Sheltered sides: 2

Pressurisation test q₅₀ design value = 8.00

Natural ventilation with intermittent extract fans

Low energy lighting: 30% of fixed lighting points

Primary heating system: Vaillant Ecotec plus 418 boiler
 SEDBUK efficiency = 90.5%
 Full zone control
 Fuel: Mains gas

Secondary heating system: Flueless gas fire or heater
 Fuel: Mains gas

Domestic hot water supply: Primary heating system
 170 litre cylinder, 50mm factory-insulated

SAP 2005 Rating 81 Band B
EI Rating 80 Band C

Target Carbon Dioxide Emission Rate **TER: 21.76**
 Dwelling Carbon Dioxide Emission Rate **DER: 20.14 PASS**

DER improvement over TER = 7%

Total CO₂ emissions = 2.67 tonnes/year

Likelihood of summer overheating: Not significant

These calculations should not be accepted without first checking the input data

Important design features (L1A Appendix B)

One or more floors has a U-value of less than 0.20

One or more roofs has a U-value of less than 0.15

One or more doors/windows/rooftlights has a U-value of less than 1.8 (1.50)

The design includes a 90.5% efficient Vaillant Ecotec plus 418 boiler