

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Built)

Property Reference	5 Grass Hill			Issued on Date	13/08/2025
Assessment Reference	001	Prop Type Ref	1		
Property	5 Grass Hill, Caversham, READING, RG4 7TJ				
SAP Rating	86 B	DER	11.63	TER	20.46
Environmental	88 B	% DER<TER	43.16		
CO ₂ Emissions (t/year)	2.31	DFEE	48.01	TFEE	53.77
General Requirements Compliance	Pass	% DFEE<TFEE	10.72		
Assessor Details	Mr. Antony Straszewski, Proport Eco-Services, Tel: 01439 788 680, strasz@proporteco.co.uk			Assessor ID	7269-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

Criterion 1 – Achieving the TER and TFEE rate

1a TER and DER

Fuel for main heating	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	20.46	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	11.63	kgCO ₂ /m ²	Pass
	-8.83 (-43.2%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	53.77	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	48.01	kWh/m ² /yr	
	-5.8 (-10.8%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.17 (max. 0.30)	0.17 (max. 0.70)	Pass
Floor	0.13 (max. 0.25)	0.13 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.15 (max. 0.35)	Pass
Openings	1.42 (max. 2.00)	1.80 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals	3.99 (measured in this dwelling)	m ³ /(h.m ²) @ 50 Pa	
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Vaillant aroTHERM plus 10kW & AI VWL105/6A230VS2		
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Secondary heating system

None

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.41 kWh/day
Permitted by DBSCG 2.56

Pass

Primary pipework insulated

Yes

Pass

6 Controls

Space heating controls

Time and temperature zone control

Pass

Hot water controls

Cylinderstat

Pass

Independent timer for DHW

Pass

7 Low energy lights

Percentage of fixed lights with low-energy fittings

100

%

Minimum

75

%

Pass

8 Mechanical ventilation

Continuous supply and extract system

Specific fan power

1.09

Maximum

1.5

Pass

MVHR efficiency

90

%

Minimum

70

%

Pass

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (Thames Valley)

Not significant

Pass

Based on:

Overshading

Average

Windows facing North East

4.36 m², No overhang

Windows facing South East

2.99 m², No overhang

Windows facing South West

29.34 m², No overhang

Windows facing North West

8.77 m², No overhang

Air change rate

0.00 ach

Blinds/curtains

Light-coloured curtain or roller blind, closed 100% of daylight hours

Criterion 4 – Building performance consistent with DER and DFEE rate

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

3.99 (measured in this dwelling)

m³/(h.m²) @ 50 Pa

Maximum

10.0

m³/(h.m²) @ 50 Pa

Pass

10 Key features

Roof U-value

0.07

W/m²K

Air permeability

4.0

m³/m²h

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