

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Built)

Property Reference	6279 - Peter N			Issued on Date	13/06/2024
Assessment Reference	002	Prop Type Ref	Detached House		
Property	Kilmory, Grass Hill, Caversham, Reading, RG4 7TJ				
SAP Rating	82 B	DER	14.73	TER	22.35
Environmental	84 B	% DER<TER	34.08		
CO ₂ Emissions (t/year)	3.27	DFEE	42.88	TFEE	61.75
General Requirements Compliance	Pass	% DFEE<TFEE	30.55		
Assessor Details	Mr. Steve Saward, UKSAPs, Tel: 01763 241797, steve@uksaps.co.uk			Assessor ID	M911-0001
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)	22.35	kgCO ₂ /m ²	Pass
Dwelling Carbon Dioxide Emission Rate (DER)	14.73	kgCO ₂ /m ²	
	-7.62 (-34.1%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	61.75	kWh/m ² /yr	Pass
Dwelling Fabric Energy Efficiency (DFEE)	42.88	kWh/m ² /yr	
	-18.8 (-30.5%)	kWh/m ² /yr	

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.11 (max. 0.30)	0.11 (max. 0.70)	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.12 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	0.80 (max. 2.00)	0.80 (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	1.89 (measured in this dwelling)	m ³ /(h.m ²) @ 50 Pa	Pass
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with warm air distribution - Electric	
---------------------	---	--

This report has been produced by an accredited Elmhurst member whose work is subject to quality assurance audits. The data used to produce the report has been verified by the Elmhurst members' portal.

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Built)

Secondary heating system

Room heaters - Wood Logs
Data from manufacturer, tested to BS EN 1266
Morso 511-43
Efficiency: 78%
Minimum: 65%

Pass

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 2.14 kWh/day
Permitted by DBSCG 2.86

Pass

Primary pipework insulated

No primary pipework

6 Controls

Space heating controls

Programmer and at least two room thermostats

Pass

Hot water controls

Cylinderstat

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

0.80

Maximum

1.5

Pass

MVHR efficiency

86 %

Minimum

70 %

Pass

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (Thames Valley)

Slight

Pass

Based on:

Overshading

Average

Windows facing North East

4.75 m², No overhang

Windows facing South East

15.40 m², No overhang

Windows facing South West

38.40 m², No overhang

Windows facing North West

7.58 m², No overhang

Air change rate

8.00 ach

Blinds/curtains

None

Criterion 4 – Building performance consistent with DER and DFEE rate

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

1.89 (measured in this dwelling) m³/(h.m²) @ 50 Pa

Maximum

10.0 m³/(h.m²) @ 50 Pa

Pass

This report has been produced by an accredited Elmhurst member whose work is subject to quality assurance audits. The data used to produce the report has been verified by the Elmhurst members' portal.

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Built)

10 Key features

External wall U-value	0.11	W/m ² K
Roof U-value	0.11	W/m ² K
Floor U-value	0.11	W/m ² K
Exposed floor U-value	0.11	W/m ² K
Door U-value	0.80	W/m ² K
Window U-value	0.80	W/m ² K
Roof window U-value	0.80	W/m ² K
Air permeability	1.9	m ³ /m ² h
Secondary heating (wood logs)	N/A	
Secondary heating fuel:	wood logs	

This report has been produced by an accredited Elmhurst member whose work is subject to quality assurance audits. The data used to produce the report has been verified by the Elmhurst members' portal.