

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Built)

Property Reference	CPUK Clarks 4			Issued on Date	16/10/2020
Assessment Reference	SAP4	Prop Type Ref			
Property	38 SADDLECOTE CLOSE, MANCHESTER, MANCHESTER, M8 5EG				
SAP Rating	84 B	DER	16.56	TER	16.63
Environmental	86 B	% DER<TER	0.44		
CO ₂ Emissions (t/year)	1.61	DFEE	47.18	TFEE	49.84
General Requirements Compliance	Pass	% DFEE<TFEE	5.33		
Assessor Details	Mr. Laurie Wills, Element Sustainability Limited, Tel: 01829 733444, laurie@elementsustainability.co.uk			Assessor ID	H367-0001
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	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	16.63	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	16.56	kgCO ₂ /m ²	Pass
	-0.07 (-0.4%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	49.84	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	47.18	kWh/m ² /yr	
	-2.6 (-5.2%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.20 (max. 0.30)	0.22 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	Pass
Roof	0.12 (max. 0.20)	0.16 (max. 0.35)	Pass
Openings	1.40 (max. 2.00)	1.40 (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	7.27 (average for dwelling type)	m ³ /(h.m ²) @ 50 Pa	
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass

Limiting System Efficiencies

4 Heating efficiency

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Main heating system

Boiler system with radiators or underfloor - Mains gas
Data from database
Vaillant Home Combi 25
Combi boiler
Efficiency: 89.3% SEDBUK2009
Minimum: 88.0%

Pass

Secondary heating system

None

5 Cylinder insulation

Hot water storage

No cylinder

6 Controls

Space heating controls

Time and temperature zone control

Pass

Hot water controls

No cylinder

Boiler interlock

Yes

Pass

7 Low energy lights

Percentage of fixed lights with low-energy fittings

100 %

Minimum

75 %

Pass

8 Mechanical ventilation

Not applicable

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (West Pennines (England))

Not significant

Pass

Based on:

Overshading

Average

Windows facing North East

6.01 m², No overhang

Windows facing South West

8.92 m², No overhang

Air change rate

0.00 ach

Blinds/curtains

None

Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type

U-value

Filled Cavity with Edge Sealing

0.00

W/m²K

Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

7.27 (average for dwelling type) m³/(h.m²) @ 50 Pa

Maximum

10.0 m³/(h.m²) @ 50 Pa

Pass

10 Key features

External wall U-value

0.12

W/m²K

Party wall U-value

0.00

W/m²K

Roof U-value

0.12

W/m²K

Roof U-value

0.10

W/m²K

Floor U-value

0.12

W/m²K

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