

PREDICTED ENERGY ASSESSMENT



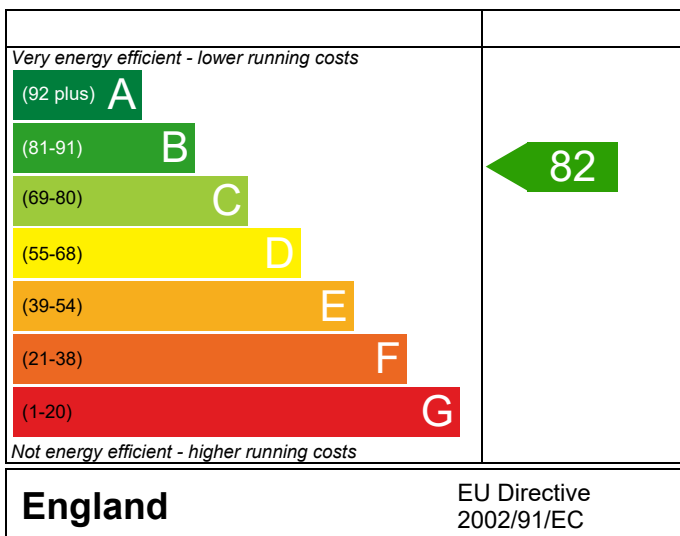
Plot 10, Land off Carleton Avenue,
Penrith,
CUMBRIA,
CA11

Dwelling type: House, Semi-Detached
Date of assessment: 23/03/2022
Produced by: Resi Resolve
Total floor area: 96.09 m²
DRRN: 2222-7177-7035

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

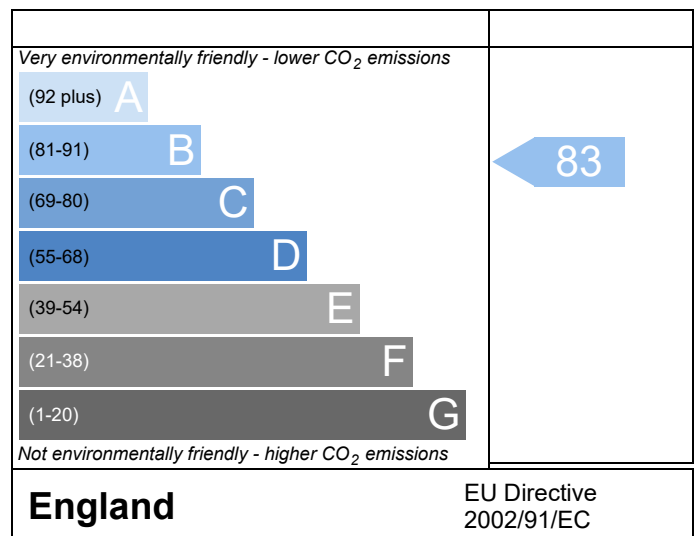
The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

Energy Efficiency Rating



The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO₂) Rating



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

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 Designed)



Property Reference	RUS/0005/22 010			Issued on Date	23/03/2022
Assessment Reference	001	Prop Type Ref	EAMONT		
Property	Plot 10, Land off Carleton Avenue, Penrith, CUMBRIA, CA11				
SAP Rating	82 B	DER	19.64	TER	19.84
Environmental	83 B	% DER<TER	1.00		
CO ₂ Emissions (t/year)	1.96	DFEE	57.33	TFEE	65.32
General Requirements Compliance	Pass	% DFEE<TFEE	12.23		
Assessor Details	Mrs. Georgina O'Connor, Resi Resolve, Tel: 07748778047, georgie@resi-resolve.co.uk			Assessor ID	T293-0001
Client	Russell Armor, RUS				

SUMMARY FOR INPUT DATA FOR New Build (As Designed)

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)	19.84	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	19.64	kgCO ₂ /m ²	Pass
	-0.20 (-1.0%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	65.32	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	57.33	kWh/m ² /yr	
	-8.0 (-12.3%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.23 (max. 0.30)	0.24 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.18 (max. 0.25)	0.18 (max. 0.70)	Pass
Roof	0.12 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.33 (max. 2.00)	1.50 (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	5.10 (design value)	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
Baxi ASSURE 18 SYSTEM

Efficiency: 89.1% SEDBUK2009
Minimum: 88.0%

Pass

Secondary heating system

None

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.61 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

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 (North West England)

Not significant

Pass

Based on:

Overshading

Average

Windows facing South East

6.86 m², No overhang

Windows facing South West

0.71 m², No overhang

Windows facing North West

5.17 m², No overhang

Air change rate

8.00 ach

Blinds/curtains

None

Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type

U-value

Solid Wall

0.00

W/m²K

Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

5.10 (design value)

m³/(h.m²) @ 50 Pa

Maximum

10.0

m³/(h.m²) @ 50 Pa

Pass

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10 Key features

Party wall U-value	0.00	W/m ² K
Roof U-value	0.11	W/m ² K
Thermal bridging y-value	0.038	W/m ² K

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RECOMMENDATIONS

	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating	£4,000 - £6,000	£36	B 84	B 85	Recommended
Photovoltaic	£3,500 - £5,500	£330	A 93	A 94	Recommended
Wind turbine			0	0	Not applicable
Totals	£7,500 - £11,500	£366	A 93	A 94	

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