

PREDICTED ENERGY ASSESSMENT



Property and Energy
Services Ltd.

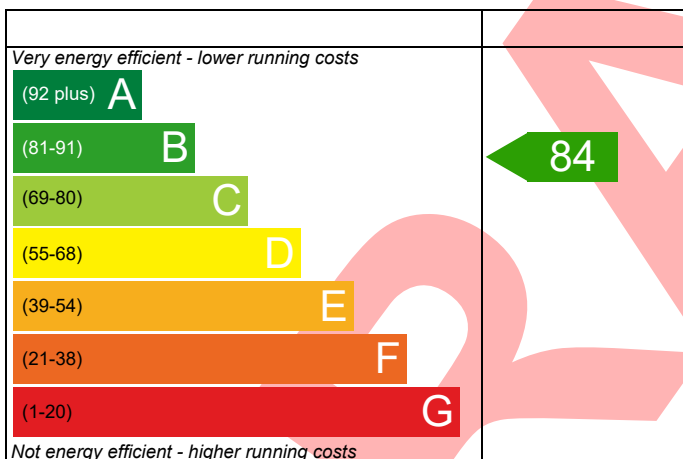
2, Aldworth Rise,
Reading,
RG1 7NA

Dwelling type: House, Mid-Terrace
Date of assessment: 08/05/2019
Produced by: Property and Energy Services
Limited
Total floor area: 81.2 m²

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

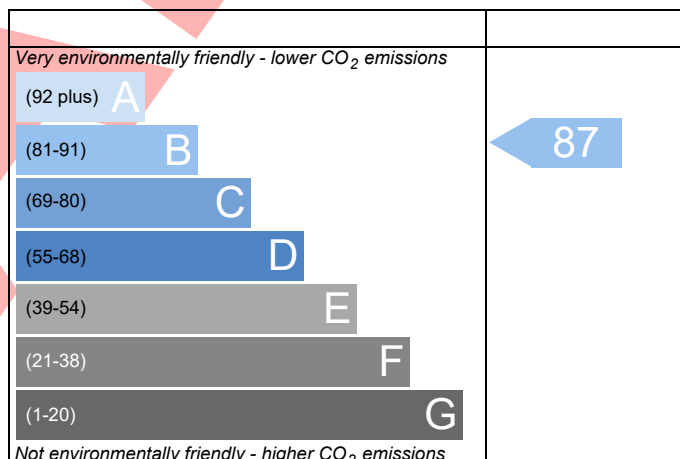


England

EU Directive
2002/91/EC

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



England

EU Directive
2002/91/EC

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 not been submitted through the Elmhurst Energy members' portal, therefore results are subject to change when the dwelling is completed.

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)



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Property Reference	3260-2	Issued on Date	08/05/2019
Assessment Reference	3260-2	Prop Type Ref	
Property	2, Aldworth Rise, Reading, RG1 7NA		
SAP Rating	84 B	DER	16.71
Environmental	87 B	TER	16.99
CO ₂ Emissions (t/year)	1.09	% DER<TER	1.63
General Requirements Compliance	Pass	DFEE	43.30
		TREE	48.19
		% DFEE<TFEE	10.15
Assessor Details	Mr. Ian Lloyd, Property and Energy Services Limited, Tel: 01367240212, ianl@propertyandenergy.co.uk		Assessor ID
			H044-0001
Client	Keen Partnership, Keen		

SUMMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TFE rate

1a TER and DER

Fuel for main heating	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	16.99	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	16.71	kgCO ₂ /m ²	Pass
	-0.28 (-1.6%)	kgCO ₂ /m ²	

1b TFE and DFEE

Target Fabric Energy Efficiency (TFEE)	48.19	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	43.30	kWh/m ² /yr	
	-4.9 (-10.2%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.22 (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	0.16 (max. 0.20)	0.16 (max. 0.35)	Pass
Openings	1.35 (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	5.00 (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
Worcester Greenstar 18Ri ErP

Efficiency: 88.8% SEDBUK2009
Minimum: 88.0%

Pass

Secondary heating system

None

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.40 kWh/day
Permitted by DBSCG 1.89

Pass

Primary pipework insulated

Yes

Pass

6 Controls

Space heating controls

Programmer, room thermostat and TRVs

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 (Thames Valley)

Slight

Pass

Based on:

Overshading

Average

Windows facing East

8.41 m², No overhang

Windows facing West

8.39 m², No overhang

Air change rate

4.00 ach

Blinds/curtains

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

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

5.00 (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
Floor U-value
Door U-value

0.00	W/m ² K
0.12	W/m ² K
1.00	W/m ² K

DRAFT

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RECOMMENDATIONS



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	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	£32	B 86	B 89	Recommended
Photovoltaic	£3,500 - £5,500	£317	A 96	A 99	Recommended
Wind turbine			0	0	Not applicable
Totals	£7,500 - £11,500	£349	A 96	A 99	

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