

PREDICTED ENERGY ASSESSMENT

Energy Calculations Ltd
SAP • CODE • SBEM • DESIGN

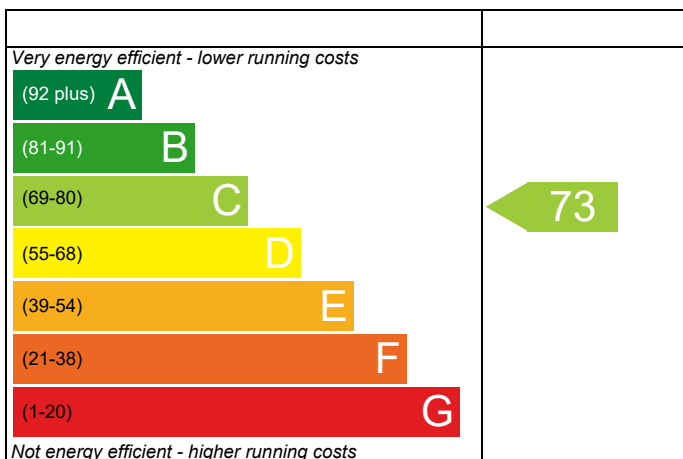
Mow Cottage, Worms Lane ,
Bognor Regis,
PO22 6BD

Dwelling type: Bungalow, Detached
Date of assessment: 04/06/2019
Produced by: Energy Calculations Limited
Total floor area: 93.64 m²
DRRN: 9901-1160-4095

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

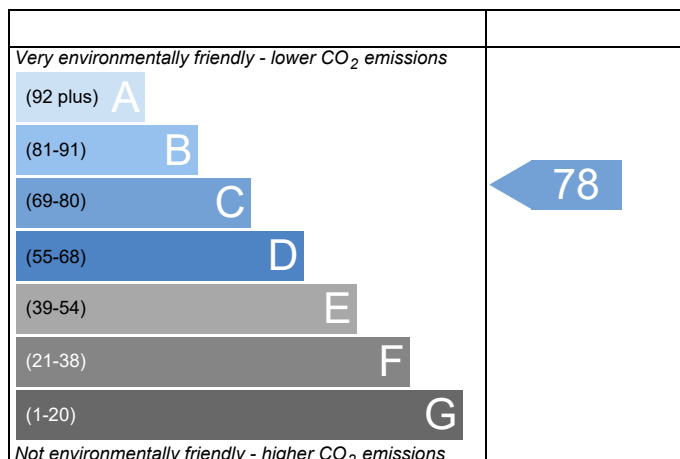


England

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 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)

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Property Reference	011418	Issued on Date	04/06/2019
Assessment Reference	001	Prop Type Ref	
Property	Mow Cottage, Worms Lane , Bognor Regis, PO22 6BD		
SAP Rating	73 C	DER	27.90
Environmental	78 C	TER	28.97
CO ₂ Emissions (t/year)	1.76	% DER<TER	3.71
General Requirements Compliance	Pass	DLEE	63.15
		TFEE	63.31
		% DLEE<TFEE	0.26
Assessor Details	Mr. Matthew Carter, Energy Calculations Limited, Tel: 01754 761035, mcarter@energycalculations.co.uk		Assessor ID
			7869-0001
Client			

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	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	28.97	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	27.90	kgCO ₂ /m ²	Pass
	-1.07 (-3.7%)	kgCO ₂ /m ²	

1b TFE and DLEE

Target Fabric Energy Efficiency (TFEE)	63.31	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DLEE)	63.15	kWh/m ² /yr	
	-0.2 (-0.3%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.30 (max. 0.30)	0.30 (max. 0.70)	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.11 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.37 (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

Main heating system	Room heaters - Electric Panel, convector or radiant heaters	
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Secondary heating system

Room heaters - Wood Logs
Closed room heater
Efficiency: 65%
Minimum: 65%

Pass

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.32 kWh/day
Permitted by DBSCG 1.81

Pass

Primary pipework insulated

No primary pipework

6 Controls

Space heating controls

Programmer and appliance 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

Not applicable

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (South East England)

Not significant

Pass

Based on:

Overshading

Average

Windows facing North

2.98 m², No overhang

Windows facing East

2.14 m², No overhang

Windows facing South

4.46 m², No overhang

Air change rate

6.00 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

5.00 (design value) m³/(h.m²) @ 50 Pa

Maximum

10.0 m³/(h.m²) @ 50 Pa

Pass

10 Key features

Roof U-value

0.10 W/m²K

Floor U-value

0.11 W/m²K

Secondary heating (wood logs)

N/A

Secondary heating fuel:

wood logs

Photovoltaic array

1.75 kW

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