

PREDICTED ENERGY ASSESSMENT

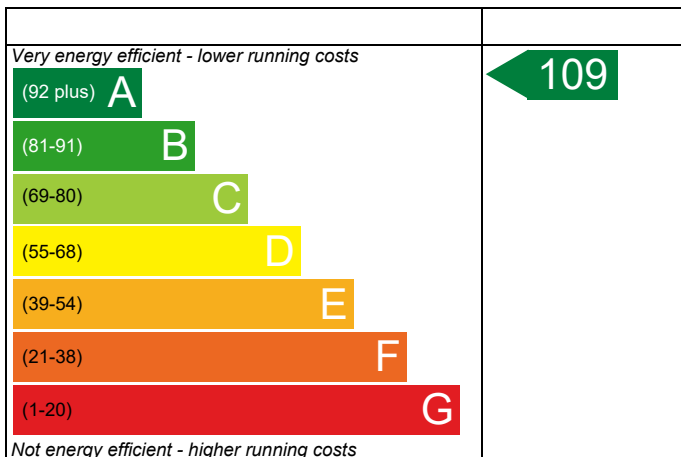
Plot 20,
Exeter,
EX4 9ER

Dwelling type: House, Semi-Detached
Date of assessment: 24/05/2021
Produced by: Katarzyna Gotlib
Total floor area: 106.17 m²
DRRN: 1320-4544-2096

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

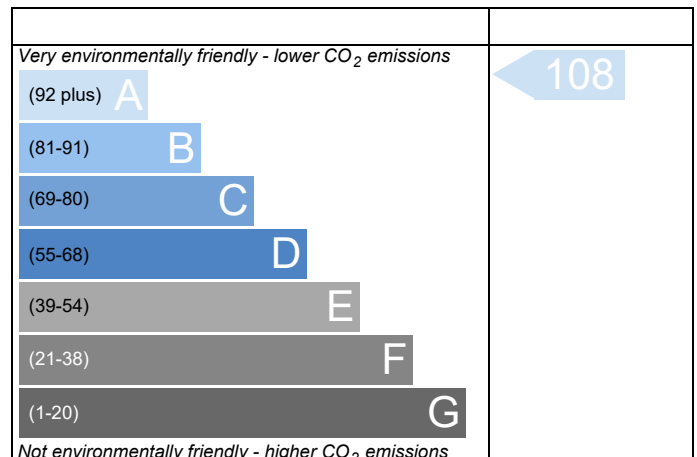


England

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.

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BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)

Property Reference	21VHPE0020		Issued on Date	24/05/2021	
Assessment Reference	001	Prop Type Ref	Plot 20 HT 02		
Property	Plot 20, Exeter, EX4 9ER				
SAP Rating	109 A	DER	-7.60	TER	27.27
Environmental	108 A	% DER<TER	127.86		
CO ₂ Emissions (t/year)	-1.27	DFEE	43.52	TFEE	60.98
General Requirements Compliance	Pass	% DFEE<TFEE	28.64		
Assessor Details	Mrs. Katarzyna Gotlib, Katarzyna Gotlib, Tel: 01579 382202, katya@hilsdonholmes.co.uk			Assessor ID	Z852-0001
Client	Verto Homes, VH				

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	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	27.27	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	-7.60	kgCO ₂ /m ²	Pass
	-34.87 (-127.9%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	60.98	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	43.52	kWh/m ² /yr	
	-17.5 (-28.7%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.18 (max. 0.30)	0.22 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.09 (max. 0.25)	0.09 (max. 0.70)	Pass
Roof	0.10 (max. 0.20)	0.10 (max. 0.35)	Pass
Openings	0.80 (max. 2.00)	1.00 (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	3.00 (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	Heat pump with radiators or underfloor - Electric Vaillant aroTHERM 7kW VWL 75/5 AS 230vS2+VWL 77/5 IS	
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Secondary heating system	None	
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5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.39 kWh/day Permitted by DBSCG 2.33	Pass
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Primary pipework insulated	Yes	Pass
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6 Controls

Space heating controls	Time and temperature zone control	Pass
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Hot water controls	Cylinderstat	Pass
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	Independent timer for DHW	Pass
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7 Low energy lights

Percentage of fixed lights with low-energy fittings	100	%	
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Minimum	75	%	Pass
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8 Mechanical ventilation

Continuous supply and extract system			
Specific fan power	0.57		

Maximum	1.5		Pass
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MVHR efficiency	94	%	
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Minimum	70	%	Pass
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Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (South West England)	Not significant	Pass
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Based on:

Overshading	Average
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Windows facing North East	6.10 m ² , No overhang
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Windows facing South West	11.72 m ² , No overhang
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Air change rate	8.00 ach
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Blinds/curtains	None
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Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type	U-value		
Filled Cavity with Edge Sealing	0.00	W/m ² K	Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	3.00 (design value)	m ³ /(h.m ²) @ 50 Pa	
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Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass
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BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)

10 Key features

Party wall U-value	0.00	W/m ² K
Roof U-value	0.10	W/m ² K
Floor U-value	0.09	W/m ² K
Floor U-value	0.09	W/m ² K
Door U-value	1.00	W/m ² K
Window U-value	0.78	W/m ² K
Air permeability	3.0	m ³ /m ² h
Photovoltaic array	4.95	kW

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