

Predicted Energy Assessment



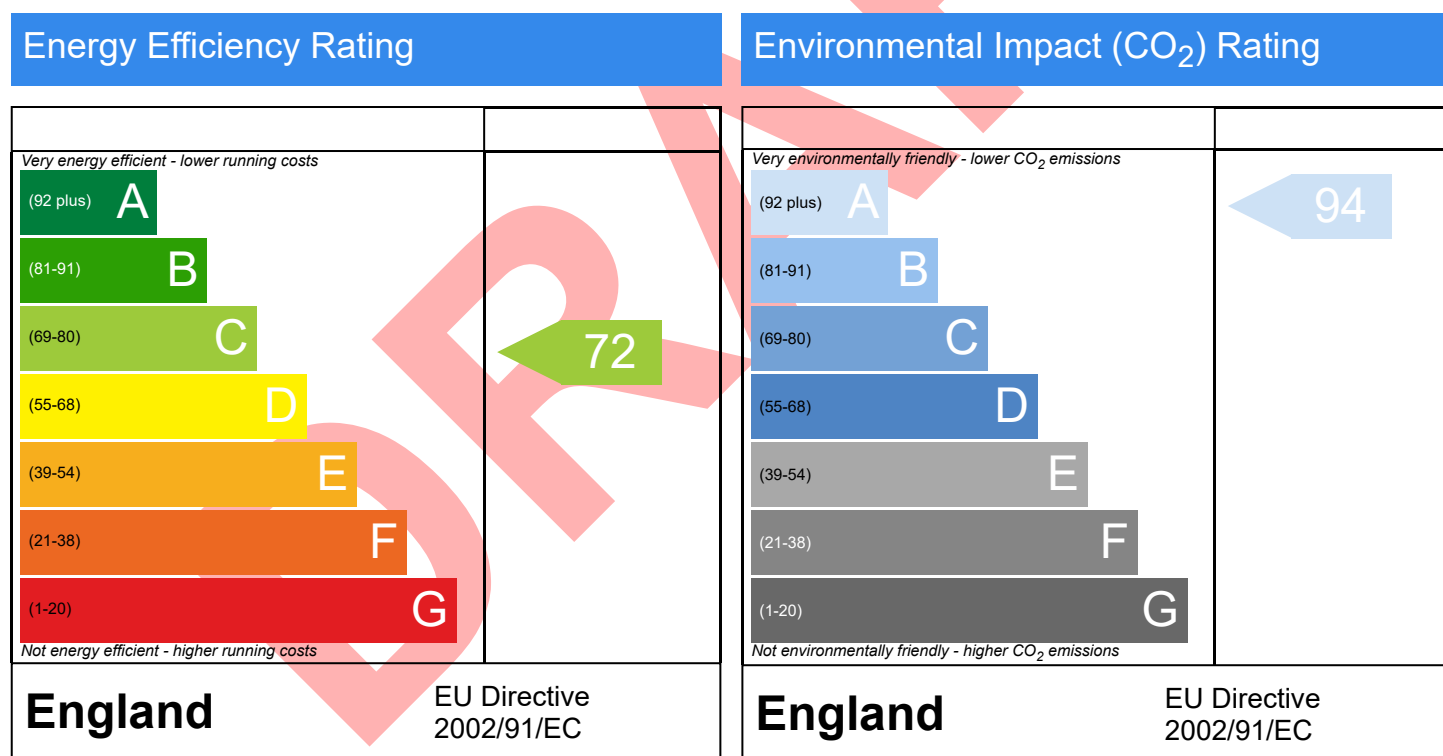
9 High Street, Barkway, Royston, SG8 8EA

Dwelling type:
Date of assessment:
Produced by:
Total floor area:
DRRN:

House, Detached
28/03/2025
Oliver Summerfield
129.39 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 SAP 10 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.



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.

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.

Summary for Input Data

Property Reference	S34875	Issued on Date	28/03/2025
Assessment Reference	Conversion V1 Adj	Prop Type Ref	
Property	9 High Street, Barkway, Royston, SG8 8EA		

SAP Rating	72 C	DER	5.97	TER	
Environmental	94 A	% DER < TER			N/A
CO ₂ Emissions (t/year)	0.7	DFEE	73.91	TFEE	
Compliance Check	N/A	% DFEE < TFEE			
% DPER < TPER		DPER	62.06	TPER	

Assessor Details	Mr. Oliver Summerfield	Assessor ID	BD24-0001
Client	Ian Abrams Architects, Darren Upson		

SUMMARY FOR INPUT DATA FOR: Conversion (As Designed)

Orientation	West	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2025	
4.0 Sheltered Sides	0	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	172.01	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	No	
Smart gas meter fitted	No	

7.0 Measurements				
	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	43.45 m	74.39 m ²	2.25 m
		33.27 m	55.00 m ²	2.39 m

8.0 Living Area	26.93	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Upgraded Brick Wall	Solid Wall	Solid wall : plasterboard on dabs, insulation, any outside structure	0.18	9.00	69.11	60.85	0.00	None	8.26	Enter Gross Area
New Cladded Wall	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.18	110.00	82.15	69.85	0.00	None	12.30	Enter Gross Area

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Stud Wall	Plasterboard on timber frame	9.00	76.80
Block Wall	Dense block, plasterboard on dabs	75.00	42.88

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Existing Sloped Roof	External Slope Roof	Plasterboard, insulated slope	0.11	9.00	14.26	13.54	None	0.00	Enter Gross Area	0.72
New Sloped Roof	External Slope Roof	Plasterboard, insulated slope	0.11	9.00	37.23	36.45	None	0.00	Enter Gross Area	0.78

Description	Storey	Construction	Area (m ²)
GF Ceiling	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	55.00

Description	Type	Storey Index	Construction	U-Value (W/m ² K)	Shelter Code	Shelter Factor	Kappa (kJ/m ² K)	Area (m ²)
New GF Slab	Ground Floor - Solid	Lowest occupied	Slab on ground, screed over insulation	0.18	None	0.00	110.00	74.39

Summary for Input Data

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
FF Floor		Plasterboard ceiling, carpeted chipboard floor	9.00	55.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazing	Manufacturer	Window	Double Low-E Soft 0.1			0.63		0.70	1.40
Rooflight	Manufacturer	Roof Light	Double Low-E Soft 0.1			0.63		0.70	1.70
HG Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
FW2	Glazing	Upgraded Brick Wall	West	4.35	
LSW2	Glazing	Upgraded Brick Wall	North	0.97	
RSW2	Glazing	Upgraded Brick Wall	South	1.05	
FR2	Rooflight	Existing Sloped Roof	West	0.72	45
FSD2	HG Door	Upgraded Brick Wall	West	1.89	
RW	Glazing	New Cladded Wall	East	6.12	
RSW	Glazing	New Cladded Wall	South	1.68	
LSR	Rooflight	New Sloped Roof	North	0.39	45
RSR	Rooflight	New Sloped Roof	South	0.39	45
RGD	HG Door	New Cladded Wall	East	2.88	
RSGD	HG Door	New Cladded Wall	South	1.62	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

Y-value

 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys

Number of open flues

Number of chimneys/flues attached to closed fire

Number of flues attached to solid fuel boiler

Number of flues attached to other heater

Number of blocked chimneys

Number of intermittent extract fans

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting	80.00	5.00	400.00	20

24.0 Main Heating 1

Percentage of Heat

 %

Database Ref. No.

Fuel Type

In Winter

In Summer

Model Name

Summary for Input Data

Manufacturer	Mitsubishi Electric Europe B.V.
System Type	Heat Pump
Controls SAP Code	2210
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Underfloor
Underfloor Heating	Yes - Pipes in thin screed
Flow Temperature	Enter value
Flow Temperature Value	45.00

25.0 Main Heating 2	None
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26.0 Heat Networks	None
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27.0 Secondary Heating	None
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28.0 Water Heating	
Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
Cold Water Source	From mains
Bath Count	1
Immersion Only Heating Hot Water	No

28.1 Showers						
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To	
Bathroom	Combi boiler or unvented hot water system	8.00		No		
E/S	Combi boiler or unvented hot water system	8.00		No		

28.3 Waste Water Heat Recovery System	
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29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	300.00	L
Loss	2.06	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store	None
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34.0 Small-scale Hydro	None
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations	
Lower cost measures	None
Further measures to achieve even higher standards	

Typical Cost	Typical savings per year	Ratings after improvement SAP rating	Environmental Impact
£4,000 - £6,000	£90	C 74	A 94
£3,500 - £5,500	£259	C 79	A 95
		0	0