

Energy performance certificate (EPC)

1 The Gardeners
Emmer Green
READING
RG4 8EZ

Energy rating

B

Valid until: **18 July 2033**

Certificate number: **9611-3028-4303-3797-6204**

Property type

Semi-detached house

Total floor area

84 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

You can read [guidance for landlords on the regulations and exemptions](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance) (<https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance>).

Energy rating and score

This property's current energy rating is B. It has the potential to be A.

[See how to improve this property's energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		98 A
81-91	B	84 B	
69-80	C		
55-68	D		
39-54	E		
21-38	F		
1-20	G		

The graph shows this property's current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.25 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 4.4 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 91 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£915 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £179 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 2,229 kWh per year for heating
- 2,039 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.3 tonnes of CO2

This property's potential production 0.1 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£178
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Samuel Green
Telephone	01753 889 551
Email	sam@merlinpropertyservices.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/017404
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 1			Issued on Date	19/07/2023
Assessment Reference	003	Prop Type Ref	Gardeners Arms		
Property	1 The Gardeners, Emmer Green, READING, RG4 8EZ				
SAP Rating	84 B	DER	17.79	TER	25.97
Environmental	86 B	% DER<TER	31.49		
CO ₂ Emissions (t/year)	1.29	DFEE	46.40	TFEE	50.54
General Requirements Compliance	Pass	% DFEE<TFEE	8.19		
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com			Assessor ID	P744-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	25.97	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	17.79	kgCO ₂ /m ²	Pass
	-8.18 (-31.5%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	50.54	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	46.40	kWh/m ² /yr	
	-4.1 (-8.1%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.69 (max. 2.00)	3.00 (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	4.35 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing North	0.50 m ² , No overhang	
Windows facing East	5.72 m ² , No overhang	
Windows facing West	3.20 m ² , 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		
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	4.35 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K

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

Energy performance certificate (EPC)

2 The Gardeners Emmer Green READING RG4 8EZ	Energy rating B	Valid until: 18 July 2033 Certificate number: 5800-4613-0932-4294-3373
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Property type

Semi-detached house

Total floor area

80 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

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Energy rating and score

This property’s current energy rating is B. It has the potential to be A.

[See how to improve this property’s energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		99 A
81-91	B	85 B	
69-80	C		
55-68	D		
39-54	E		
21-38	F		
1-20	G		

The graph shows this property’s current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.25 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 3.5 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 89 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£850 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £176 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 1,881 kWh per year for heating
- 2,012 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.2 tonnes of CO2

This property's potential production 0.0 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£176
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Samuel Green
Telephone	01753 889 551
Email	sam@merlinpropertyservices.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/017404
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 2			Issued on Date	19/07/2023
Assessment Reference	003	Prop Type Ref	Gardeners Arms		
Property	2 The Gardeners, Emmer Green, READING, RG4 8EZ				
SAP Rating	85 B	DER	17.52	TER	25.95
Environmental	87 B	% DER<TER	32.49		
CO ₂ Emissions (t/year)	1.20	DFEE	43.86	TFEE	49.50
General Requirements Compliance	Pass	% DFEE<TFEE	11.39		
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com			Assessor ID	P744-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	25.95	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	17.52	kgCO ₂ /m ²	Pass
	-8.43 (-32.5%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	49.50	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	43.86	kWh/m ² /yr	
	-5.6 (-11.3%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.18 (max. 0.35)	Pass
Openings	1.69 (max. 2.00)	3.00 (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	3.46 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing East	5.32 m ² , No overhang	
Windows facing South	1.40 m ² , No overhang	
Windows facing West	2.80 m ² , 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		
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	3.46 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K
Air permeability	3.5	m ³ /m ² h

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

Energy performance certificate (EPC)

3 The Gardeners
Emmer Green
READING
RG4 8EZ

Energy rating

B

Valid until: **18 July 2033**

Certificate number: **8800-4613-0932-8294-3373**

Property type

Detached house

Total floor area

128 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

You can read [guidance for landlords on the regulations and exemptions](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance) (<https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance>).

Energy rating and score

This property's current energy rating is B. It has the potential to be A.

[See how to improve this property's energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		94 A
81-91	B	84 B	
69-80	C		
55-68	D		
39-54	E		
21-38	F		
1-20	G		

The graph shows this property's current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.24 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 4.2 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 80 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£1,219 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £184 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 3,915 kWh per year for heating
- 2,171 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.7 tonnes of CO2

This property's potential production 0.5 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£185
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

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About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 3		Issued on Date	19/07/2023	
Assessment Reference	003	Prop Type Ref	Gardeners Arms		
Property	3 The Gardeners, Emmer Green, READING, RG4 8EZ				
SAP Rating	84 B	DER	15.52	TER	24.69
Environmental	86 B	% DER<TER	37.14		
CO₂ Emissions (t/year)	1.72	DFEE	47.73	TFEE	57.02
General Requirements Compliance	Pass	% DFEE<TFEE	16.30		
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com			Assessor ID	P744-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	24.69	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	15.52	kgCO ₂ /m ²	Pass
	-9.17 (-37.1%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	57.02	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	47.73	kWh/m ² /yr	
	-9.3 (-16.3%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.55 (max. 2.00)	3.00 (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	4.22 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing North	11.32 m ² , No overhang	
Windows facing East	0.50 m ² , No overhang	
Windows facing South	6.64 m ² , No overhang	
Windows facing West	1.80 m ² , 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	
		W/m ² K
		Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	4.22 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K

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Energy performance certificate (EPC)

4 The Gardeners Emmer Green READING RG4 8EZ	Energy rating B	Valid until: 18 July 2033 Certificate number: 9737-4633-3200-0931-8292
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Property type

Detached house

Total floor area

142 square metres

Rules on letting this property

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the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.25 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 4.5 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 75 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£1,275 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £186 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 4,219 kWh per year for heating
- 2,183 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.8 tonnes of CO2

This property's potential production 0.6 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£185
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Samuel Green
Telephone	01753 889 551
Email	sam@merlinpropertyservices.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/017404
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 4				Issued on Date	19/07/2023
Assessment Reference	003			Prop Type Ref	Gardeners Arms	
Property	4 The Gardeners, Emmer Green, READING, RG4 8EZ					
SAP Rating	85 B	DER	14.56	TER	23.54	
Environmental	86 B	% DER<TER	38.16			
CO ₂ Emissions (t/year)	1.80	DFEE	46.68	TFEE	55.85	
General Requirements Compliance	Pass	% DFEE<TFEE	16.42			
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com				Assessor ID	P744-0001
Client						

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	23.54	kgCO ₂ /m ²
Dwelling Carbon Dioxide Emission Rate (DER)	14.56	kgCO ₂ /m ²
	-8.98 (-38.1%)	kgCO ₂ /m ²

Pass

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	55.85	kWh/m ² /yr
Dwelling Fabric Energy Efficiency (DFEE)	46.68	kWh/m ² /yr
	-9.2 (-16.5%)	kWh/m ² /yr

Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.50 (max. 2.00)	2.35 (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	4.48 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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 North	1.60 m ² , No overhang	
Windows facing East	10.38 m ² , No overhang	
Windows facing South	4.41 m ² , No overhang	
Windows facing West	7.44 m ² , 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	
		W/m ² K
		Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	4.48 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K

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

Energy performance certificate (EPC)

5 The Gardeners Emmer Green READING RG4 8EZ	Energy rating B	Valid until: 18 July 2033 Certificate number: 2237-5633-3200-0971-8292
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Property type

Semi-detached house

Total floor area

91 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

You can read [guidance for landlords on the regulations and exemptions](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance) (<https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance>).

Energy rating and score

This property’s current energy rating is B. It has the potential to be A.

[See how to improve this property’s energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		97 A
81-91	B	84 B	
69-80	C		
55-68	D		
39-54	E		
21-38	F		
1-20	G		

The graph shows this property’s current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.25 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 5.7 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 88 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£957 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £180 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 2,430 kWh per year for heating
- 2,077 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.4 tonnes of CO2

This property's potential production 0.1 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£180
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Samuel Green
Telephone	01753 889 551
Email	sam@merlinpropertyservices.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/017404
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 5		Issued on Date	19/07/2023	
Assessment Reference	003	Prop Type Ref	Gardeners Arms		
Property	5 The Gardeners, Emmer Green, READING, RG4 8EZ				
SAP Rating	84 B	DER	17.25	TER	25.23
Environmental	86 B	% DER<TER	31.64		
CO₂ Emissions (t/year)	1.35	DFEE	46.51	TFEE	50.26
General Requirements Compliance	Pass	% DFEE<TFEE	7.48		
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com			Assessor ID	P744-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	25.23	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	17.25	kgCO ₂ /m ²	Pass
	-7.98 (-31.6%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	50.26	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	46.51	kWh/m ² /yr	
	-3.8 (-7.6%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.65 (max. 2.00)	3.00 (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	5.70 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing East	5.72 m ² , No overhang	
Windows facing South West	0.70 m ² , No overhang	
Windows facing West	4.25 m ² , No overhang	
Windows facing North West	0.70 m ² , 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		
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	5.70 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K

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

Energy performance certificate (EPC)

6 The Gardeners
Emmer Green
READING
RG4 8EZ

Energy rating

B

Valid until: **18 July 2033**

Certificate number: **4337-5633-3200-0911-8296**

Property type

Semi-detached house

Total floor area

91 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

You can read [guidance for landlords on the regulations and exemptions](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance) (<https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance>).

Energy rating and score

This property's current energy rating is B. It has the potential to be A.

[See how to improve this property's energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		97 A
81-91	B	85 B	
69-80	C		
55-68	D		
39-54	E		
21-38	F		
1-20	G		

The graph shows this property's current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.25 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 4.8 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 87 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£942 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £181 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 2,312 kWh per year for heating
- 2,077 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.3 tonnes of CO2

This property's potential production 0.1 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£180
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Samuel Green
Telephone	01753 889 551
Email	sam@merlinpropertyservices.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/017404
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 6		Issued on Date	19/07/2023	
Assessment Reference	003	Prop Type Ref	Gardeners Arms		
Property	6 The Gardeners, Emmer Green, READING, RG4 8EZ				
SAP Rating	85 B	DER	16.98	TER	24.84
Environmental	86 B	% DER<TER	31.63		
CO₂ Emissions (t/year)	1.33	DFEE	44.73	TFEE	48.70
General Requirements Compliance	Pass	% DFEE<TFEE	8.15		
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com			Assessor ID	P744-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	24.84	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	16.98	kgCO ₂ /m ²	Pass
	-7.86 (-31.6%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	48.70	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	44.73	kWh/m ² /yr	
	-4.0 (-8.2%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.14 (max. 0.35)	Pass
Openings	1.67 (max. 2.00)	3.00 (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	4.81 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing East	5.72 m ² , No overhang	
Windows facing South	0.50 m ² , No overhang	
Windows facing West	4.35 m ² , 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		
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	4.81 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K

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

Energy performance certificate (EPC)

7 The Gardeners
Emmer Green
READING
RG4 8EZ

Energy rating

B

Valid until: **18 July 2033**

Certificate number: **6337-5633-3200-0921-8292**

Property type

Detached house

Total floor area

143 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

You can read [guidance for landlords on the regulations and exemptions](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance) (<https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance>).

Energy rating and score

This property's current energy rating is B. It has the potential to be A.

[See how to improve this property's energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		94 A
81-91	B	85 B	
69-80	C		
55-68	D		
39-54	E		
21-38	F		
1-20	G		

The graph shows this property's current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property’s energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Walls	Average thermal transmittance 0.25 W/m²K	Very good
Roof	Average thermal transmittance 0.14 W/m²K	Very good
Floor	Average thermal transmittance 0.11 W/m²K	Very good
Windows	High performance glazing	Very good
Main heating	Air source heat pump, radiators, electric	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Poor
Lighting	Low energy lighting in all fixed outlets	Very good
Air tightness	Air permeability 3.5 m³/h.m² (as tested)	Good
Secondary heating	None	N/A

Low and zero carbon energy sources

Low and zero carbon energy sources release very little or no CO2. Installing these sources may help reduce energy bills as well as cutting carbon emissions. The following low or zero carbon energy sources are installed in this property:

- Air source heat pump

Primary energy use

The primary energy use for this property per year is 74 kilowatt hours per square metre (kWh/m2).



How this affects your energy bills

An average household would need to spend **£1,263 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £186 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2023** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 4,103 kWh per year for heating
- 2,184 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is B. It has the potential to be A.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year. CO2 harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO2

This property produces 1.8 tonnes of CO2

This property's potential production 0.6 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Solar water heating	£4,000 - £6,000	£185
2. Solar photovoltaic panels	£3,500 - £5,500	£683

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Samuel Green
Telephone	01753 889 551
Email	sam@merlinpropertyservices.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/017404
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	19 July 2023
Date of certificate	19 July 2023
Type of assessment	SAP

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



Property Reference	RG4 8NA - Plot 7		Issued on Date	19/07/2023	
Assessment Reference	003	Prop Type Ref	Gardeners Arms		
Property	7 The Gardeners, Emmer Green, READING, RG4 8EZ				
SAP Rating	85 B	DER	14.38	TER	23.28
Environmental	87 B	% DER<TER	38.24		
CO₂ Emissions (t/year)	1.78	DFEE	45.20	TFEE	54.74
General Requirements Compliance	Pass	% DFEE<TFEE	17.42		
Assessor Details	Mr. Samuel Green, Samuel Green, Tel: 07944 018 791, sam@merlinpropertyservices.com			Assessor ID	P744-0001
Client					

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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)	23.28	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	14.38	kgCO ₂ /m ²	Pass
	-8.90 (-38.2%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	54.74	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	45.20	kWh/m ² /yr	
	-9.5 (-17.4%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.18 (max. 0.35)	Pass
Openings	1.51 (max. 2.00)	2.35 (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	3.49 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Air-to-water heat pump	
Secondary heating system	None	

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Built)



5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.03	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

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	9.87 m ² , No overhang	
Windows facing South	4.41 m ² , No overhang	
Windows facing West	7.20 m ² , 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	
		W/m ² K
		Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	3.49 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Floor U-value	0.11	W/m ² K
Thermal bridging y-value	0.035	W/m ² K
Air permeability	3.5	m ³ /m ² h

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