Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Tue 07 Apr 2026 11:55:33

Project Information			
Assessed By	Ross Lingley	Building Type	House, Detached
OCDEA Registration	EES/019514	Assessment Date	2026-04-07

Dwelling Details			
Assessment Type	As designed	Total Floor Area	116 m^2
Site Reference	Plot 083 (Wreay)	Plot Reference	As Designed
Address			

Client Details	
Name	Josh Halliwell
Company	Genesis Homes
Address	Agricola House, Penrith, CA11 9BN

This report covers items included within the SAP calculations. It is not a complete report of regulations compliance.

1a Target emission rate and dwelling emission rate		
Fuel for main heating system	Mains gas	
Target carbon dioxide emission rate	*11.72 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	11.65 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*61.46 kWh_{PE}/m^2*	
Dwelling primary energy	61.32 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*44.0 kWh/m^2*	
Dwelling fabric energy efficiency	43.6 kWh/m^2	OK

2a Fabric U-values				
Element	***Maximum permitted average U-Value [W/m^2K]***	**Dwelling average U-Value [W/m^2K]**	**Element with highest individual U-Value**	
External walls	*0.26*	0.19	Walls (2) (0.24)	OK
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	N/A	**N/A**
Floors	*0.18*	0.12	Floor above Garage (0.19)	OK
Roofs	*0.16*	0.09	Roof (1) (0.09)	OK
Windows, doors, and roof windows	*1.6*	1.35	Entrance Door (1.5)	OK
Rooflights	*2.2*	N/A	N/A	**N/A**

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))		
Name	**Net area [m^2]**	**U-Value [W/m^2K]**
Exposed wall: Walls (1)	137.0995	0.18
Exposed wall: Walls (2)	16.08	0.24
Ground floor: Heatloss Floor 1, Heatloss Floor 1	56.18	0.11
Upper floor: Floor above Garage, Floor above Garage	10.88	0.19
Exposed roof: Roof (1)	64.28	0.09 **(!)**

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
Entrance Door, Entrance Door	2.142	West	N/A	1.5
Front Windows, Windows	0.8349	West	0.7	1.31
Front Windows, Windows	1.7	West	0.7	1.31
Front Windows, Windows	1.5125	West	0.7	1.31
Front Windows, Windows	1.5	West	0.7	1.31
Rear Glazed Door, Glazed Door	3.8191	East	0.7	1.31
Rear Windows, Windows	0.7245	East	0.7	1.31
Rear Windows, Windows	1.3125	East	0.7	1.31
Rear Windows, Windows	0.483	East	0.7	1.31
Rear Windows, Windows	1.5	East	0.7	1.31
Rear Windows, Windows	1.5	East	0.7	1.31
Side Door, Entrance Door	2.142	South	N/A	1.5

Name	Area [m^2]	Orientation	Frame factor	U-Value [W/m^2K]

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))				
Building part **1**: Thermal bridging calculated from linear thermal transmittances for each junction				
Main element	**Junction detail**	**Source**	**Psi value [W/mK]**	**Drawing / reference**
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.053	SIG Psi
External wall	E17: Corner (inverted - internal area greater than external area)	Calculated by person with suitable expertise	0.022 **(!)**	SIG Psi
External wall	E20: Exposed floor (normal)	Calculated by person with suitable expertise	0.083	SIG Psi
External wall	E21: Exposed floor (inverted)	Calculated by person with suitable expertise	0.045	SIG Psi
External wall	E10: Eaves (insulation at ceiling level)	Calculated by person with suitable expertise	0.09	SIG Psi
External wall	E12: Gable (insulation at ceiling level)	Calculated by person with suitable expertise	0.078	SIG Psi
External wall	E2: Other lintels (including other steel lintels)	Calculated by person with suitable expertise	0.096	SIG Psi
External wall	E3: Sill	Calculated by person with suitable expertise	0.04	SIG Psi
External wall	E4: Jamb	Calculated by person with suitable expertise	0.06	SIG Psi
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.105	SIG Psi
External wall	E6: Intermediate floor within a dwelling	Calculated by person with suitable expertise	0.08	SIG Psi

3 Air permeability (better than typically expected values are flagged with a subsequent (!))		
Maximum permitted air permeability at 50Pa	*8 m^3/hm^2*	
Dwelling air permeability at 50Pa	4.5 m^3/hm^2, Design value	**OK**
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Boiler with radiators or underfloor heating - Mains gas	
Efficiency	88.4%
Emitter type	Radiators
Flow temperature	
System type	Combi boiler
Manufacturer	Baxi Heating
Model	ASSURE
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: N/A	
Capacity	N/A
Declared heat loss	N/A
Primary pipework insulated	N/A
Manufacturer	
Model	
Commissioning	
Waste water heat recovery system 1 - type: N/A	
Efficiency	
Manufacturer	
Model	

6 Controls		
Main heating 1 - type: Time and temperature zone control by arrangement of plumbing and electrical services		
Function		
Ecodesign class		
Manufacturer		
Model		
Water heating - type: N/A		
Manufacturer		
Model		

7 Lighting		
Minimum permitted light source efficacy	*75 lm/W*	
Lowest light source efficacy	100 lm/W	**OK**
External lights control	N/A	

8 Mechanical ventilation		
System type: N/A		
Maximum permitted specific fan power	*N/A*	
Specific fan power	N/A	**N/A**
Minimum permitted heat recovery efficiency	*N/A*	
Heat recovery efficiency	N/A	**N/A**
Manufacturer/Model		
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	2.436 kWp
Orientation	West
Pitch	30°
Overshading	None or very little
Manufacturer	
MCS certificate	

10 Heat networks
N/A

11 Supporting documentary evidence
N/A

12 Declarations	
a. Assessor Declaration	
This declaration by the assessor is confirmation that the contents of this BREL Compliance Report are a true and accurate reflection based upon the design information submitted for this dwelling for the purpose of carrying out the "As designed" assessment, and that the supporting documentary evidence (SAP Conventions, Appendix 1 (documentary evidence) schedules the minimum documentary evidence required) has been reviewed in the course of preparing this BREL Compliance Report.	
Signed: Name:	Assessor ID: Date:
b. Client Declaration	
N/A	

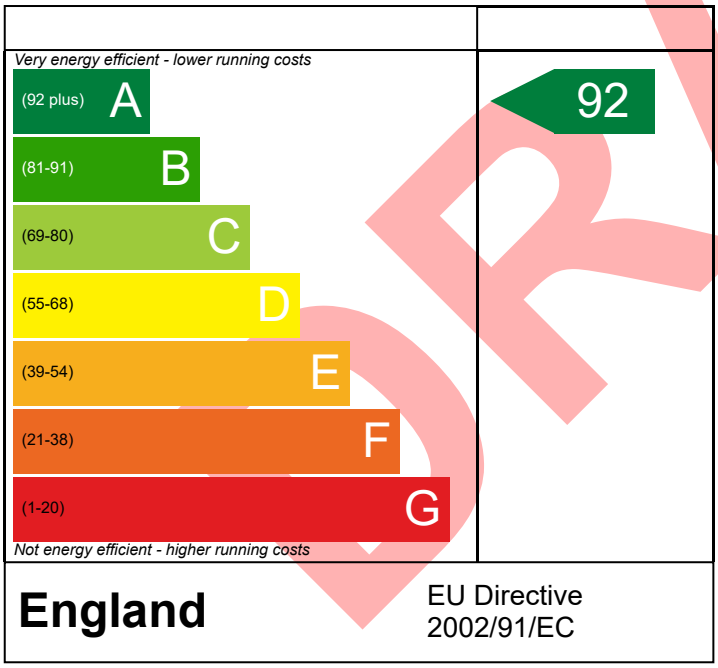
Predicted Energy Assessment

Dwelling type:	House, Detached
Date of assessment:	07/04/2026
SAP Version:	10.2
Produced by:	Ross Lingley
Total floor area:	116.38 m²
DRRN:	

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.

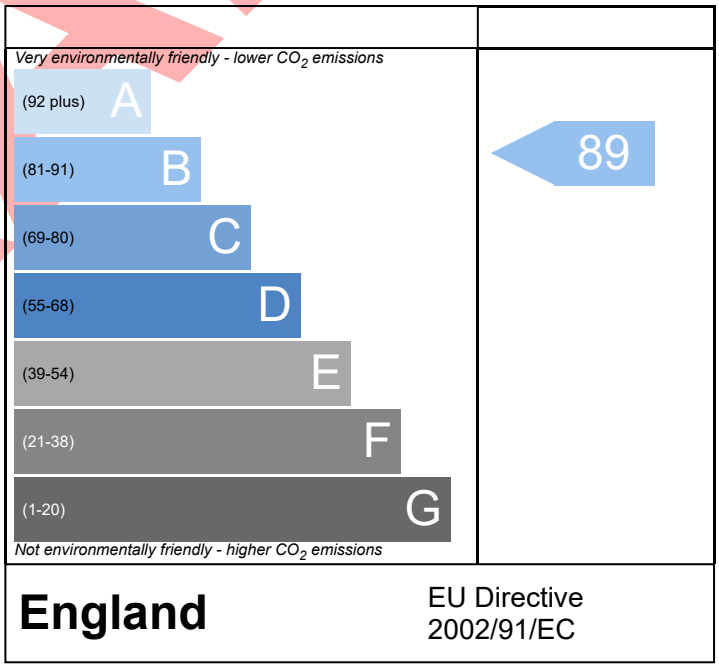
The energy performance has been assessed using the Government approved SAP 10 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO2) emissions.

Energy Efficiency Rating



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 (CO_2) Rating



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO_2) emissions. The higher the rating the less impact it has on the environment.

DRAFT

Summary for Input Data

elmhurst energy

Plot Reference	Plot 083 (Wreay)	Issued on Date	07/04/2026
Assessment Reference	As Designed	Plot Type Ref	
Plot Address		SAP Version	10.2

SAP Rating	92 A	DER	11.65	TER	11.72
Environmental	89 B	% DER < TER			0.60
CO_2 Emissions (t/year)	1.42	DFEE	43.62	TFEE	43.99
Compliance Check	See BREL	% DFEE < TFEE			0.83
% DPER < TPER	0.22	DPER	61.32	TPER	61.46

Assessor Details	Mr. Ross Lingley	Assessor ID	P768-0001
Client	Genesis Homes, Josh Halliwell		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	West	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	0	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	86.16	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	No	
Smart gas meter fitted	No	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	32.76 m	52.10 m²	2.39 m
1st Storey:	34.08 m	64.28 m²	2.76 m

8.0 Living Area 21.50 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall 1	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	156.27	137.10	0.00	None	19.17	Enter Gross Area
Wall to Garage	Timber Frame	Timber framed wall (one layer of plasterboard)	0.24	9.00	16.08	16.08	0.00	None	0.00	Enter Gross Area

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Wall GF	Plasterboard on timber frame	9.00	76.62
Internal Wall FF	Plasterboard on timber frame	9.00	171.45

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
External Roof 1	External Plane Roof	Plasterboard, insulated at ceiling level	0.09	9.00	64.28	64.28	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	52.10

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Heatloss Floor 1	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	56.18
Floor above Garage	Exposed Floor - Timber	+1	Timber exposed floor, insulation between joists	0.19	None	0.00	20.00	10.88

11.2 Internal Floors

Summary for Input Data

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	52.10

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Entrance Door	Manufacturer	Solid Door				0.76			1.50
Glazed Door	Manufacturer	Window	Double glazed			0.76		0.70	1.31
Windows	Manufacturer	Window	Double glazed			0.76		0.70	1.31

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Entrance Door	Entrance Door	External Wall 1	West	2.14	
Front Windows	Windows	External Wall 1	West	5.55	
Rear Glazed Door	Glazed Door	External Wall 1	East	3.82	
Rear Windows	Windows	External Wall 1	East	5.52	
Side Door	Entrance Door	External Wall 1	South	2.14	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	
17.0 Thermal Bridging	Calculate Bridges	

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E16 Corner (normal)	Independently assessed	33.29	0.05	0.05	SIG Psi	No
E17 Corner (inverted – internal area greater than external area)	Independently assessed	12.69	0.02	0.02	SIG Psi	No
E20 Exposed floor (normal)	Independently assessed	6.73	0.08	0.08	SIG Psi	No
E21 Exposed floor (inverted)	Independently assessed	6.73	0.04	0.04	SIG Psi	No
E10 Eaves (insulation at ceiling level)	Independently assessed	16.40	0.09	0.09	SIG Psi	No
E12 Gable (insulation at ceiling level)	Independently assessed	17.68	0.08	0.08	SIG Psi	No
E2 Other lintels (including other steel lintels)	Independently assessed	13.19	0.10	0.10	SIG Psi	Yes
E3 Sill	Independently assessed	11.15	0.04	0.04	SIG Psi	Yes
E4 Jamb	Independently assessed	33.68	0.06	0.06	SIG Psi	Yes
E5 Ground floor (normal)	Independently assessed	32.76	0.10	0.10	SIG Psi	Yes
E6 Intermediate floor within a dwelling	Independently assessed	34.08	0.08	0.08	SIG Psi	Yes

Y-value	0.05	W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	No

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	4
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting	No				
	Name	**Efficacy**	**Power**	**Capacity**	**Count**
	Lighting 1	100.00	5.00	500.00	25

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	18736	

Summary for Input Data

elmhurst energy

Fuel Type	Mains gas
In Winter	88.40
In Summer	86.70
Model Name	ASSURE
Manufacturer	Baxi Heating
System Type	Combi boiler
Controls SAP Code	2110
Controls description	Time and temperature zone control by arrangement
Delayed Start Stat	Yes
Flue Type	Balanced
Fan Assisted Flue	Yes
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Unknown
Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	None

25.0 Main Heating 2	None
26.0 Heat Networks	None
27.0 Secondary Heating	None

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

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	None
32.0 Photovoltaic Unit	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	No
Battery Capacity [kWh]	0.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
2.44	West	30°	None Or Little		No	1.00		

34.0 Small-scale Hydro	None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

Summary for Input Data

	Typical Cost	Typical savings per year	Ratings after improvement	
			SAP rating	Environmental Impact
Solar water heating			A 92	B 90
Photovoltaic			0	0
Wind turbine			0	0

Thermal Bridging

Plot Reference	Plot 083 (Wreay)	**Issued on Date**	07/04/2026
Assessment Reference	As Designed	**Plot Type Ref**	Detached House
Plot Address		**SAP Version**	10.2

SAP Rating	92 A	**DER**	11.65	**TER**	11.72
Environmental	89 B	**% DER < TER**			0.60
CO_2 Emissions (t/year)	1.42	**DFEE**	43.62	**TFEE**	43.99
Compliance Check	See BREL	**% DFEE < TFEE**			0.83
% DPER < TPER	0.22	**DPER**	61.32	**TPER**	61.46

Assessor Details	Mr. Ross Lingley	**Assessor ID**	P768-0001
Client	Genesis Homes, Josh Halliwell		

	Junction details	Source Type	Psi (W/mK)	Length (m)	Result	Reference
External wall	E16 Corner (normal)	Independently assessed	0.053	33.29	1.76	SIG Psi
External wall	E17 Corner (inverted – internal area greater than external area)	Independently assessed	0.022	12.69	0.28	SIG Psi
External wall	E20 Exposed floor (normal)	Independently assessed	0.083	6.73	0.56	SIG Psi
External wall	E21 Exposed floor (inverted)	Independently assessed	0.045	6.73	0.30	SIG Psi
External wall	E10 Eaves (insulation at ceiling level)	Independently assessed	0.090	16.40	1.48	SIG Psi
External wall	E12 Gable (insulation at ceiling level)	Independently assessed	0.078	17.68	1.38	SIG Psi
External wall	E2 Other lintels (including other steel lintels)	Independently assessed	0.096	13.19	1.27	SIG Psi
External wall	E3 Sill	Independently assessed	0.040	11.15	0.45	SIG Psi
External wall	E4 Jamb	Independently assessed	0.060	33.68	2.02	SIG Psi
External wall	E5 Ground floor (normal)	Independently assessed	0.105	32.76	3.44	SIG Psi
External wall	E6 Intermediate floor within a dwelling	Independently assessed	0.080	34.08	2.73	SIG Psi

Total: 218.38 W/mK:

Y-Value: 0.05 W/m²K:

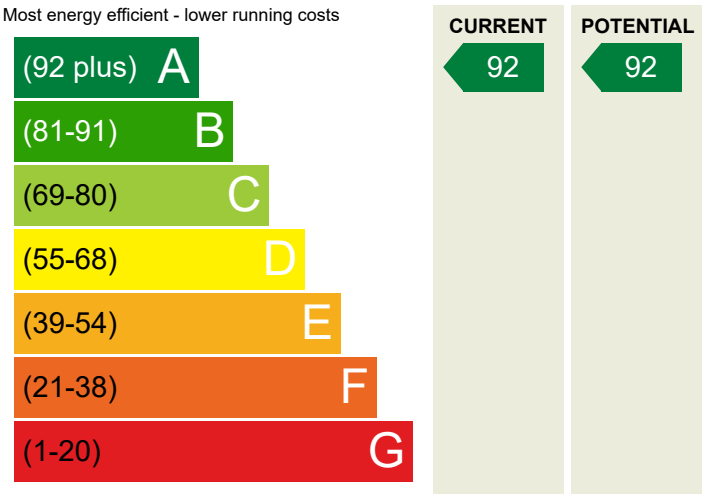
Energy Report

Dwelling Address	
Reference	Plot 083 (Wreay)-As Designed
SAP Version	10.2
Assessment Date	23/03/2026
Submission Date	
Property Type	House, Detached
Total Floor Area	116

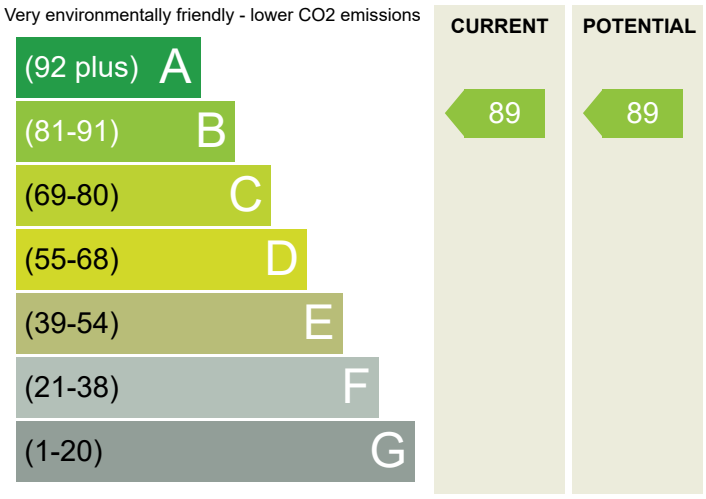
This Energy Report has been generated using the UK's National Calculation Methodology for dwellings, Standard Assessment Procedure (SAP). This methodology is used to assess the energy efficiency of dwellings which is calculated based on a dwelling's heating, hot water, ventilation and lighting usage.

This document is not an Energy Performance Certificate (EPC) as required by the Energy Performance of Buildings Regulations

Energy Efficiency Rating

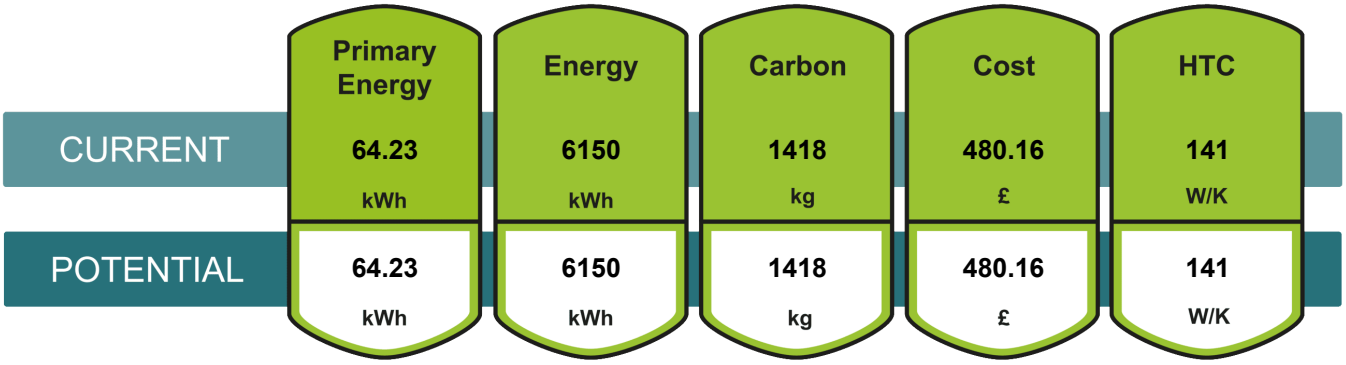


Carbon Dioxide (CO2) Emissions Rating



Additional ratings for your home

Energy Report



Energy Report

Breakdown of property's energy performance

Each feature is assessed as one of the following:

Very Poor | Poor | Average | Good | Very Good

Feature	Description	Energy Performance
Walls	Average thermal transmittance 0.19 W/m²K	Very Good
Roof	Average thermal transmittance 0.09 W/m²K	Very Good
Floor	Average thermal transmittance 0.12 W/m²K	Very Good
Windows	High performance glazing	Good
Main heating	Boiler and radiators, mains gas	Very Good
Main heating controls	Time and temperature zone control	Very Good
Secondary heating	None	
Hot water	From main system	Very Good
Lighting	Excellent lighting efficiency	Very Good
Air tightness	Air permeability [AP50] = 4.5 m³/h.m² (assumed)	Good

Recommendations

The recommended measures provided below will help to improve the energy efficiency of the dwelling.
To reach the dwelling's potential energy rating all of the recommended measures shown below would need to be installed.
Having these measures installed individually or in any other order may give a different result when compared with the cumulative potential rating.

Recommended measures	Cumulative savings (per year)	Cumulative rating	Typical costs	Incremental savings (per year)	Cumulative CO2 rating
Solar water heating	£29	A 92			B 90

The typical cost is based on average installation prices across the country so may not be representative of the actual costs in your area.

Energy Report

Estimated energy costs of the dwelling

The table below shows the estimated running costs of the space and water heating and lighting within the dwelling. It does not include the energy used from household appliances. The estimated annual costs after potential improvements indicates the total energy cost if all recommended measures named above were installed.

	Estimated annual costs	Estimated annual costs after potential improvements	Potential future savings
Lighting	£68	£68	
Heating	£511	£511	
Hot Water	£176	£176	
New Technologies e.g. Impact of PV	-(£275)	-(£275)	
TOTAL	£480	£480	

Estimated energy use and potential savings

Space Heating
5187
kWh per year

Water Heating
2410
kWh per year

Energy Report

About this document

Created by:	
Company/Trading name:	
Phone number:	
Email address:	

Disclaimer

This Energy Report should not under any circumstances be treated as a Condition Survey and cannot be used to indicate that any element of the dwelling (e.g.heating system) is working correctly.
This Energy Report must not be used in situations where an Energy Performance Certificate (EPC) is required.
This Energy Report is generated from a set of data inputs which may not reflect the actual dimensions, services or construction of the dwelling.
The calculation used to generate this report reflects the SAP Methodology current at the time of report generation.

Glossary terms for additional metrics

Primary Energy	The measure of the energy required for lighting, heating and hot water in a property. This includes the efficiency of the property's heating system, power station efficiency for electricity and the energy used to produce the fuel and deliver it to the property.
Energy Used	The estimated amount of fuel energy for lighting, heating and hot water for the property. The estimate is based on typical usage which is likely to be different to actual consumption.
Carbon (CO2)	The current emissions based on the energy estimates.
Cost	The estimated cost of energy. The cost of each unit of fuel is based on an industry standard which is likely to be different to those the occupier actually pays.
Heat Transfer Coefficient	Heat flow through the property envelope where internal and external temperatures are different.

Dwelling Sign Off Report

Plot Reference	Plot 083 (Wreay)	**Issued on Date**	07/04/2026
Assessment Reference	As Designed	**Plot Type Ref**	Detached House
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SAP Rating	92 A	**DER**	11.65	**TER**	11.72
Environmental	89 B	**% DER < TER**			0.60
CO_2 Emissions (t/year)	1.42	**DFEE**	43.62	**TFEE**	43.99
Compliance Check	See BREL	**% DFEE < TFEE**			0.83
% DPER < TPER	0.22	**DPER**	61.32	**TPER**	61.46

Assessor Details	Mr. Ross Lingley	**Assessor ID**	P768-0001
Client	Genesis Homes, Josh Halliwell		

This report should be used for a client to confirm key assessment details for production of Energy Performance Certificates and should be retained as documentary evidence. It cannot be used in lieu of a BREL/BRWL/Compliance report for demonstrating Building Regulation compliance.

Section 1: Dwelling Information

Dwelling Address (Please confirm final postal address and post code of the dwelling.)

House Name		
House Number		
Postcode		
Street		
Town		
County		

Dwelling Orientation West (Please confirm orientation of main entrance door of the dwelling.)

Comments

Terrain Type Suburban

Property Type House, Detached

Comments

Electricity Tariff Standard

Smart electricity meter fitted: No

Smart gas meter fitted: No

Comments

Section 2: Dwelling Construction Details

External Walls

Description	External Wall 1		
Type	Timber Frame		
Construction	Timber framed wall (one layer of plasterboard)		
U-value	0.18	W/m²K	U-value calculations should be provided to verify the u-value entered into the Assessment
Gross Area	156.27	m²	

Description	Wall to Garage		
Type	Timber Frame		
Construction	Timber framed wall (one layer of plasterboard)		
U-value	0.24	W/m²K	U-value calculations should be provided to verify the u-value entered into the Assessment
Gross Area	16.08	m²	

Comments

External Roofs

Description	External Roof 1		
Type	External Plane Roof		
Construction	Plasterboard, insulated at ceiling level		
U-value	0.09	W/m²K	U-value calculations should be provided to verify the u-value entered into the Assessment
Gross Area	64.28	m²	

Comments

Heat Loss Floors

Description	Heatloss Floor 1		
Type	Ground Floor - Solid		
Construction	Suspended concrete floor, carpeted		
U-value	0.11	W/m²K	U-value calculations should be provided to verify the u-value entered into the Assessment
Area	56.18	m²	

Description	Floor above Garage		
Type	Exposed Floor - Timber		
Construction	Timber exposed floor, insulation between joists		
U-value	0.19	W/m²K	U-value calculations should be provided to verify the u-value entered into the Assessment
Area	10.88	m²	

Comments

Opening Types

Description	Data Source	Type	Glazing	G-value	Frame Type	U-Value (W/m²K)
Entrance Door	Manufacturer	Solid Door	Double glazed	0.76		1.50
Glazed Door	Manufacturer	Window	Double glazed	0.76		1.31
Windows	Manufacturer	Window	Double glazed	0.76		1.31

Comments

Openings

Name	Opening Type	Location	Orientation	Area (m²)
Entrance Door	Entrance Door	External Wall 1	West	2.14
Front Windows	Windows	External Wall 1	West	5.55
Rear Glazed Door	Glazed Door	External Wall 1	East	3.82

Rear Windows	Windows	External Wall 1	East	5.52
Side Door	Entrance Door	External Wall 1	South	2.14

Comments

Thermal Bridging Calculate Bridges

List of Bridges

Bridge Type	Source Type	Length (m)	Psi (W/mK)	Reference
E16 Corner (normal)	Independently assessed	33.29	0.05	SIG Psi
E17 Corner (inverted – internal area greater than external area)	Independently assessed	12.69	0.02	SIG Psi
E20 Exposed floor (normal)	Independently assessed	6.73	0.08	SIG Psi
E21 Exposed floor (inverted)	Independently assessed	6.73	0.04	SIG Psi
E10 Eaves (insulation at ceiling level)	Independently assessed	16.40	0.09	SIG Psi
E12 Gable (insulation at ceiling level)	Independently assessed	17.68	0.08	SIG Psi
E2 Other lintels (including other steel lintels)	Independently assessed	13.19	0.10	SIG Psi
E3 Sill	Independently assessed	11.15	0.04	SIG Psi
E4 Jamb	Independently assessed	33.68	0.06	SIG Psi
E5 Ground floor (normal)	Independently assessed	32.76	0.10	SIG Psi
E6 Intermediate floor within a dwelling	Independently assessed	34.08	0.08	SIG Psi

Y-value 0.052

Comments

Where specific construction details have been used documentary evidence should be provided to the SAP assessor, usually in the form of signed checklists.

Pressure Testing Yes

Designed AP_{50} 4.50 $m^3/(h.m^2)$ @ 50 Pa

Property Tested? Yes

Test Method Blower Door

Where an air pressure test has been carried out a copy of the test certificate should be forwarded to the SAP assessor.

Comments

Section 3: Dwelling Systems

Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	4
Number of passive vents	0

Number of flueless gas fires	0

Comments

Fixed Cooling System No

Comments

Lighting

No Fixed Lighting: No

Name	Efficacy (lm/W)	Power (W)	Capacity (lm)	Count
Lighting 1	100.00	5.00	500.00	25

Comments

Main Heating 1 Database

Fuel Type	Mains gas	
Winter Efficiency	88.40	%
Summer Efficiency	86.70	%
Model Name	ASSURE	
Manufacturer	Baxi Heating	
System Type	Combi boiler	
Flue Type	Balanced	
Fan Assisted Flue	Yes	
Heat Emitter	Radiators	
Flow Temperature	Unknown	
Flow Temperature Value	35.00	

Comments

Heating Controls

Description	Time and temperature zone control by arrangement
Boiler Interlock	Yes
Delayed Start Stat	Yes
PCDF Control Description	

Comments

Main Heating 2	
Secondary Heating	None

Water Heating System

Water Heating	Main Heating 1
Supplementary Immersion	Yes
SAP Code	901
Water use <= 125 l/p/day	Yes
Cold Water Source	From mains
Number of baths	1

Comments

Hot Water Cylinder	None

Comments

Waste Water Heat Recovery System

Comments

Section 4: Dwelling Renewable Energy

Photovoltaic Unit	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	No
Battery Capacity [kWh]	0.00

PV Cells kWp	Orientation	Elevation	Overshading	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
2.44	West	30°	None Or Little	No	1.00		

Comments

Section 5: Declaration

I confirm to the best of my knowledge the details provided in this report are an accurate representation of how the dwelling has been constructed.

Signed .....

Dwelling Sign Off Report

Date .....