Building Regulations England Part L (BREL) Compliance Report

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

Date: Fri 15 May 2026 09:55:35

Project Information			
Assessed By	Ross Lingley	Building Type	House, Detached
OCDEA Registration	EES/019514	Assessment Date	2026-05-15

Dwelling Details			
Assessment Type	As designed	Total Floor Area	177 m^2
Site Reference	Plot 02 (Whillan)	Plot Reference	As Designed
Address	2 Centurion Way, CA5 6FJ		

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	*8.43 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	8.34 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*44.02 kWh_{PE}/m^2*	
Dwelling primary energy	43.5 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*35.3 kWh/m^2*	
Dwelling fabric energy efficiency	35.2 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*	0.18	Walls (2) (0.22)	OK
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	N/A	**N/A**
Floors	*0.18*	0.11	Heatloss Floor 1 (0.11)	OK
Roofs	*0.16*	0.13	Roof (2) (0.17)	OK
Windows, doors, and roof windows	*1.6*	1.33	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)	167.4248	0.18
Sheltered wall: Walls (2)	12.21	0.22
Sheltered wall: Walls (3)	28.06	0.17
Ground floor: Heatloss Floor 1, Heatloss Floor 1	62.12	0.11
Exposed roof: Roof (1)	18.89	0.09 **(!)**
Exposed roof: Roof (2)	21.4044	0.17

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	North	N/A	1.5
Front Windows, Windows	1.632	North	0.7	1.31
Front Windows, Windows	1.632	North	0.7	1.31
Front Windows, Windows	2.4435	North	0.7	1.31
Front Windows, Windows	2.172	North	0.7	1.31
Rear Glazed Door, Glazed Door	3.8191	South	0.7	1.31
Rear Windows, Windows	1.5	South	0.7	1.31
Rear Windows, Windows	1.5	South	0.7	1.31
Rear Windows, Windows	1.5	South	0.7	1.31
Rear Windows, Windows	1.3125	South	0.7	1.31
Rear Windows, Windows	0.7245	South	0.7	1.31

Name	Area [m^2]	Orientation	Frame factor	U-Value [W/m^2K]
Side Window, Windows	0.4876	West	0.7	1.31
Front Roof Window, Roof Windows	0.6225	North	0.7	1.31
Rear Roof Windows, Roof Windows	0.8881	South	0.7	1.31
Rear Roof Windows, Roof Windows	0.6225	South	0.7	1.31
Rear Roof Windows, Roof Windows	0.6225	South	0.7	1.31

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	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
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	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	E13: Gable (insulation at rafter level)	Calculated by person with suitable expertise	0.077	SIG Psi
Roof	R8: Roof to wall (rafter)	Calculated by person with suitable expertise	0.053	SIG Psi
Roof	R6: Flat ceiling	Calculated by person with suitable expertise	0.013 **(!)**	SIG Psi
External wall	E1: Steel lintel with perforated steel base plate	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
Roof	R1: Head of roof window	Calculated by person with suitable expertise	0.039 **(!)**	SIG Psi
Roof	R2: Sill of roof window	Calculated by person with suitable expertise	0.031 **(!)**	SIG Psi
Roof	R3: Jamb of roof window	Calculated by person with suitable expertise	0.037 **(!)**	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	3.248 kWp
Orientation	South
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

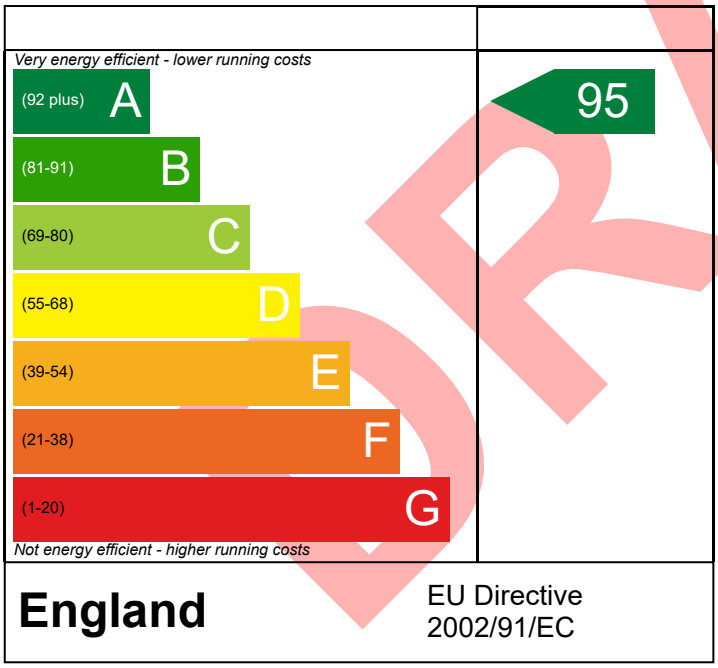
2 Centurion Way, ca5 6fj

Dwelling type:	House, Detached
Date of assessment:	15/05/2026
SAP Version:	10.2
Produced by:	Ross Lingley
Total floor area:	176.78 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.

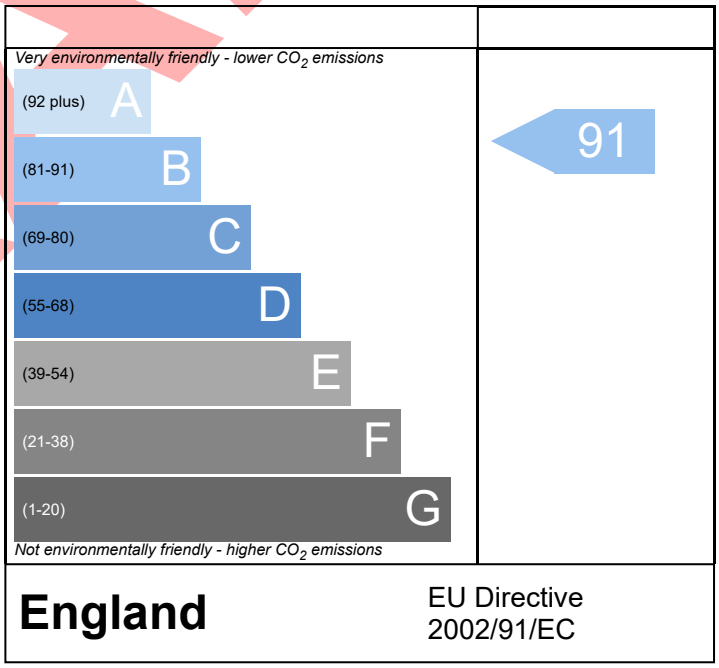
The energy performance has been assessed using the Government approved SAP 10 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO2) emissions.

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 02 (Whillan)	**Issued on Date**	15/05/2026
Assessment Reference	As Designed	**Plot Type Ref**	
Plot Address	2 Centurion Way, ca5 6fj	**SAP Version**	10.2

SAP Rating	95 A	**DER**	8.34	**TER**	8.43
Environmental	91 B	**% DER < TER**			1.07
CO_2 Emissions (t/year)	1.51	**DFEE**	35.18	**TFEE**	35.26
Compliance Check	See BREL	**% DFEE < TFEE**			0.24
% DPER < TPER	1.17	**DPER**	43.50	**TPER**	44.02

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

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

Orientation	North	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	73.52	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:	36.30 m	70.89 m²	2.39 m
1st Storey:	34.50 m	68.48 m²	2.70 m
2nd Storey:	25.82 m	37.41 m²	2.33 m

8.0 Living Area	28.28	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	188.29	167.42	0.00	None	20.87	Enter Gross Area
Wall to Garage	Timber Frame	Timber framed wall (one layer of plasterboard)	0.24	9.00	12.21	12.21	0.35	Garage Single 1 Outside	0.00	Enter Gross Area
Stud Walls	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	28.06	28.06	0.50	Room In Roof	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	103.82
Internal Wall FF	Plasterboard on timber frame	9.00	172.53
Internal Wall SF	Plasterboard on timber frame	9.00	56.85

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	18.89	18.89	None	0.00	Enter Gross Area	0.00
Pitched Roof	External Slope Roof	Plasterboard, insulated slope	0.17	9.00	24.16	21.40	None	0.00	Enter Gross Area	2.76

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	68.48
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	64.99

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

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	62.12

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	68.48
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	37.41

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
Roof Windows	Manufacturer	Roof Window	Double glazed			0.78		0.70	1.31

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Entrance Door	Entrance Door	External Wall 1	North	2.14	
Front Windows	Windows	External Wall 1	North	7.88	
Rear Glazed Door	Glazed Door	External Wall 1	South	3.82	
Rear Windows	Windows	External Wall 1	South	6.54	
Side Window	Windows	External Wall 1	West	0.49	
Front Roof Window	Roof Windows	Pitched Roof	North	0.62	0
Rear Roof Windows	Roof Windows	Pitched Roof	South	2.13	0

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
E5 Ground floor (normal)	Independently assessed	36.30	0.10	0.10	SIG Psi	No
E6 Intermediate floor within a dwelling	Independently assessed	60.32	0.08	0.08	SIG Psi	No
E16 Corner (normal)	Independently assessed	34.65	0.05	0.05	SIG Psi	No
E17 Corner (inverted – internal area greater than external area)	Independently assessed	7.48	0.02	0.02	SIG Psi	No
E10 Eaves (insulation at ceiling level)	Independently assessed	16.60	0.09	0.09	SIG Psi	No
E12 Gable (insulation at ceiling level)	Independently assessed	11.48	0.08	0.08	SIG Psi	No
E13 Gable (insulation at rafter level)	Independently assessed	5.45	0.08	0.08	SIG Psi	No
R8 Roof to wall (rafter)	Independently assessed	17.24	0.05	0.05	SIG Psi	No
R6 Flat ceiling	Independently assessed	16.60	0.01	0.01	SIG Psi	No
E1 Steel lintel with perforated steel base plate	Independently assessed	15.32	0.10	0.10	SIG Psi	Yes
E3 Sill	Independently assessed	14.30	0.04	0.04	SIG Psi	Yes
E4 Jamb	Independently assessed	31.84	0.06	0.06	SIG Psi	Yes
R1 Head of roof window	Independently assessed	3.32	0.04	0.04	SIG Psi	Yes
R2 Sill of roof window	Independently assessed	3.32	0.03	0.03	SIG Psi	Yes
R3 Jamb of roof window	Independently assessed	6.64	0.04	0.04	SIG Psi	Yes

Y-value	0.06	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	5
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

Summary for Input Data

Test Method	Blower Door				
22.0 Lighting					
No Fixed Lighting	No				
	Name	**Efficacy**	**Power**	**Capacity**	**Count**
	Lighting 1	100.00	5.00	500.00	35
24.0 Main Heating 1	Database				
Percentage of Heat	100.00	%			
Database Ref. No.	18738				
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				

Summary for Input Data

Battery Capacity [kWh] 0.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
3.25	South	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

	Typical Cost	Typical savings per year	Ratings after improvement	
			SAP rating	Environmental Impact
Solar water heating			A 96	A 92
Photovoltaic			0	0
Wind turbine			0	0

Thermal Bridging

elmhurst energy

Plot Reference	Plot 02 (Whillan)	**Issued on Date**	15/05/2026
Assessment Reference	As Designed	**Plot Type Ref**	Detached House
Plot Address	2 Centurion Way, ca5 6fj	**SAP Version**	10.2

SAP Rating	95 A	**DER**	8.34	**TER**	8.43
Environmental	91 B	**% DER < TER**			1.07
CO_2 Emissions (t/year)	1.51	**DFEE**	35.18	**TFEE**	35.26
Compliance Check	See BREL	**% DFEE < TFEE**			0.24
% DPER < TPER	1.17	**DPER**	43.50	**TPER**	44.02

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	E5 Ground floor (normal)	Independently assessed	0.105	36.30	3.81	SIG Psi
External wall	E6 Intermediate floor within a dwelling	Independently assessed	0.080	60.32	4.83	SIG Psi
External wall	E16 Corner (normal)	Independently assessed	0.053	34.65	1.84	SIG Psi
External wall	E17 Corner (inverted – internal area greater than external area)	Independently assessed	0.022	7.48	0.16	SIG Psi
External wall	E10 Eaves (insulation at ceiling level)	Independently assessed	0.090	16.60	1.49	SIG Psi
External wall	E12 Gable (insulation at ceiling level)	Independently assessed	0.078	11.48	0.90	SIG Psi
External wall	E13 Gable (insulation at rafter level)	Independently assessed	0.077	5.45	0.42	SIG Psi
External roof	R8 Roof to wall (rafter)	Independently assessed	0.053	17.24	0.91	SIG Psi
External roof	R6 Flat ceiling	Independently assessed	0.013	16.60	0.22	SIG Psi
External wall	E1 Steel lintel with perforated steel base plate	Independently assessed	0.096	15.32	1.47	SIG Psi
External wall	E3 Sill	Independently assessed	0.040	14.30	0.57	SIG Psi
External wall	E4 Jamb	Independently assessed	0.060	31.84	1.91	SIG Psi
External roof	R1 Head of roof window	Independently assessed	0.039	3.32	0.13	SIG Psi
External roof	R2 Sill of roof window	Independently assessed	0.031	3.32	0.10	SIG Psi
External roof	R3 Jamb of roof window	Independently assessed	0.037	6.64	0.25	SIG Psi

Total: 280.86 W/mK:

Y-Value: 0.06 W/m²K:

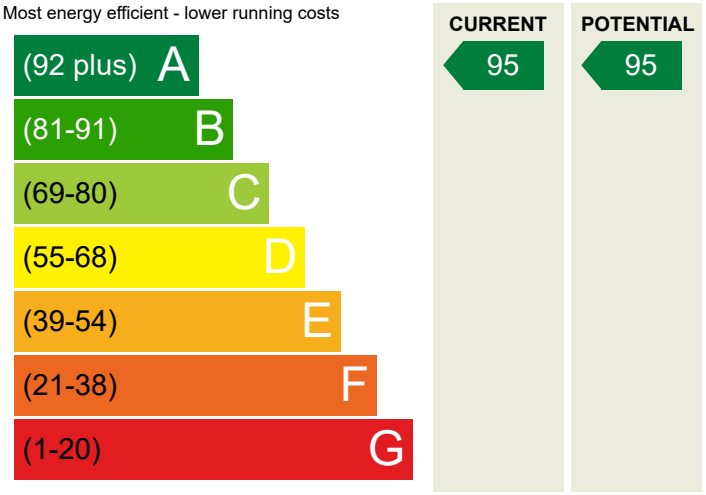
Energy Report

Dwelling Address	2 Centurion Way, ca5 6fj
Reference	Plot 02 (Whillan)-As Designed
SAP Version	10.2
Assessment Date	30/04/2026
Submission Date	
Property Type	House, Detached
Total Floor Area	177

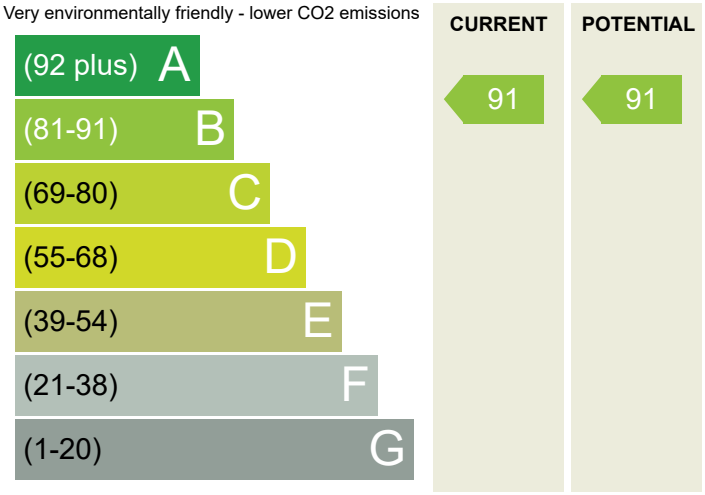
This Energy Report has been generated using the UK's National Calculation Methodology for dwellings, Standard Assessment Procedure (SAP). This methodology is used to assess the energy efficiency of dwellings which is calculated based on a dwelling's heating, hot water, ventilation and lighting usage.

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

Energy Efficiency Rating

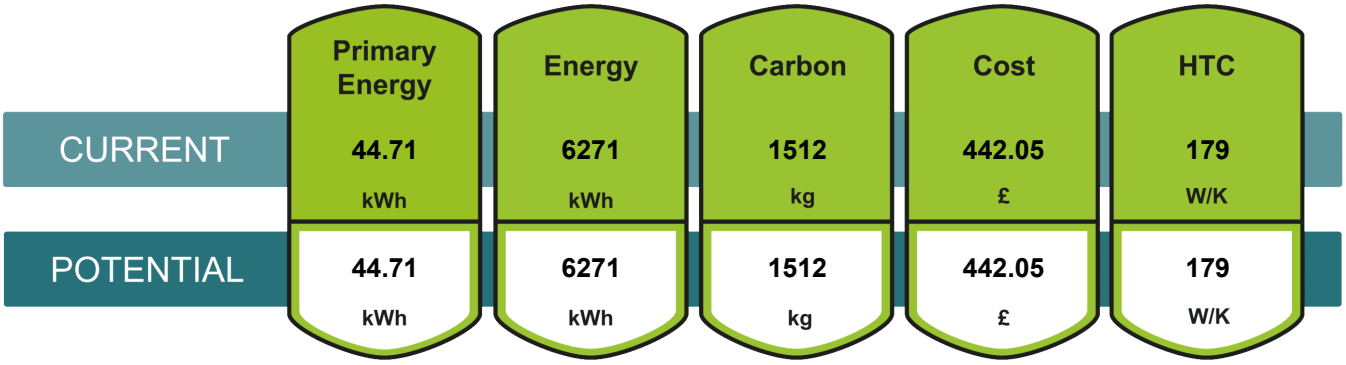


Carbon Dioxide (CO2) Emissions Rating



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 0.18 W/m²K	Very Good
Roof	Average thermal transmittance 0.13 W/m²K	Very Good
Floor	Average thermal transmittance 0.11 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	£27	A 96			A 92

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	£87	£87	
Heating	£583	£583	
Hot Water	£178	£178	
New Technologies e.g. Impact of PV	-(£407)	-(£407)	
TOTAL	£442	£442	

Estimated energy use and potential savings

Space Heating
6163
kWh per year

Water Heating
2436
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 02 (Whillan)	**Issued on Date**	15/05/2026
Assessment Reference	As Designed	**Plot Type Ref**	Detached House
Plot Address	2 Centurion Way, ca5 6fj	**SAP Version**	10.2

SAP Rating	95 A	**DER**	8.34	**TER**	8.43
Environmental	91 B	**% DER < TER**			1.07
CO_2 Emissions (t/year)	1.51	**DFEE**	35.18	**TFEE**	35.26
Compliance Check	See BREL	**% DFEE < TFEE**			0.24
% DPER < TPER	1.17	**DPER**	43.50	**TPER**	44.02

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	2 Centurion Way
Postcode	ca5 6fj
Street	
Town	
County	

Dwelling Orientation North (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	188.29	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	12.21	m²	

Description	Stud Walls		
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	28.06	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	18.89	m²	

Description	Pitched Roof		
Type	External Slope Roof		
Construction	Plasterboard, insulated slope		
U-value	0.17	W/m²K	U-value calculations should be provided to verify the u-value entered into the Assessment
Gross Area	24.16	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	62.12	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
Roof Windows	Manufacturer	Roof Window	Double glazed	0.78		1.31

Comments

Openings

Name	Opening Type	Location	Orientation	Area (m²)
Entrance Door	Entrance Door	External Wall 1	North	2.14
Front Windows	Windows	External Wall 1	North	7.88
Rear Glazed Door	Glazed Door	External Wall 1	South	3.82
Rear Windows	Windows	External Wall 1	South	6.54
Side Window	Windows	External Wall 1	West	0.49
Front Roof Window	Roof Windows	Pitched Roof	North	0.62
Rear Roof Windows	Roof Windows	Pitched Roof	South	2.13

Comments

Thermal Bridging Calculate Bridges

List of Bridges

Bridge Type	Source Type	Length (m)	Psi (W/mK)	Reference
E5 Ground floor (normal)	Independently assessed	36.30	0.10	SIG Psi
E6 Intermediate floor within a dwelling	Independently assessed	60.32	0.08	SIG Psi
E16 Corner (normal)	Independently assessed	34.65	0.05	SIG Psi
E17 Corner (inverted – internal area greater than external area)	Independently assessed	7.48	0.02	SIG Psi
E10 Eaves (insulation at ceiling level)	Independently assessed	16.60	0.09	SIG Psi
E12 Gable (insulation at ceiling level)	Independently assessed	11.48	0.08	SIG Psi
E13 Gable (insulation at rafter level)	Independently assessed	5.45	0.08	SIG Psi
R8 Roof to wall (rafter)	Independently assessed	17.24	0.05	SIG Psi
R6 Flat ceiling	Independently assessed	16.60	0.01	SIG Psi
E1 Steel lintel with perforated steel base plate	Independently assessed	15.32	0.10	SIG Psi
E3 Sill	Independently assessed	14.30	0.04	SIG Psi
E4 Jamb	Independently assessed	31.84	0.06	SIG Psi
R1 Head of roof window	Independently assessed	3.32	0.04	SIG Psi
R2 Sill of roof window	Independently assessed	3.32	0.03	SIG Psi
R3 Jamb of roof window	Independently assessed	6.64	0.04	SIG Psi

Y-value 0.057

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	5
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	35

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

Dwelling Sign Off Report

PV Cells kWp	Orientation	Elevation	Overshading	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
3.25	South	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 .....

Date .....