Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed by Kaizen SAP 10.2 SAP 10 program, 10.2.03

Date: Tue 17 Feb 2026 09:42:10

Project Information			
Assessed By	Connor Campbell	Building Type	Maisonette, Detached
OCDEA Registration	KAZN000009	Assessment Date	2026-02-04

Dwelling Details			
Assessment Type	As designed	Total Floor Area	70 m^2
Site Reference	008	Plot Reference	Plot 08
Address	008 - Plot 08, ..., RG10 8AG		

Client Details	
Name	Palantine Homes
Company	Palantine Homes
Address	Suite 3, Woodlands Court, Burnham Road, BEACONSFIELD, HP9 2SF

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	Electricity	
Target carbon dioxide emission rate	*12.36 kgCO_2/m^2*	
Dwelling carbon dioxide emission rate	5.64 kgCO_2/m^2	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*66.21 kWh$_{PE}$/m^2*	
Dwelling primary energy	66.17 kWh$_{PE}$/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*51.16 kWh/m^2*	
Dwelling fabric energy efficiency	51.12 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*	0.16	Wl - Dormer (0.2)	OK
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	N/A	**N/A**
Floors	*0.18*	0.18	Flr - Exposed Garage (0.18)	OK
Roofs	*0.16*	0.14	Rf - Ins Rafter (0.15)	OK
Windows, doors, and roof windows	*1.6*	1.32	Front (1.4)	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: Wl - Clad	42.88	0.18
Exposed wall: Wl - Garage	3.266	0.16
Exposed wall: Wl - Dormer	14.7	0.2
Exposed wall: Wl - Stud Ashlar	34.175	0.108 **(!)**
Ground floor: Flr - Ground	5.332	0.13
Ground floor: Flr - Exposed Garage	58.853	0.18
Exposed roof: Rf - Ins Joist	22.097	0.11
Exposed roof: Rf - Ins Rafter	40.495	0.15
Exposed roof: Rf - Flat Dormer	10.599	0.15

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
Front, Door (1)	2.343	South West	0.7	1.4
Front, Windows (1)	7.329	South West	1.0	1.3
Rear, RoofLights (1)	4.035	North East	1.0	1.3

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))
Building part **1 - Main Dwelling**: Thermal bridging calculated from linear thermal transmittances for each junction

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E2: Other lintels (including other steel lintels)	Calculated by person with suitable expertise	0.064	Not Provided
External wall	E4: Jamb	Calculated by person with suitable expertise	0.016 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.112	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Calculated by person with suitable expertise	0.063	Not Provided
External wall	E11: Eaves (insulation at rafter level)	Calculated by person with suitable expertise	0.017 **(!)**	Not Provided
External wall	E13: Gable (insulation at rafter level)	Calculated by person with suitable expertise	0.062	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.054	Not Provided
External wall	E20: Exposed floor (normal)	Calculated by person with suitable expertise	0.116	Not Provided
External wall	E21: Exposed floor (inverted)	SAP table default	0.32	Not Provided
Roof	R1: Head of roof window	Calculated by person with suitable expertise	0.058	Not Provided
Roof	R2: Sill of roof window	Calculated by person with suitable expertise	0.049	Not Provided
Roof	R3: Jamb of roof window	Calculated by person with suitable expertise	0.058	Not Provided
Roof	R6: Flat ceiling	SAP table default	0.12	Not Provided
Roof	R7: Flat ceiling (inverted)	SAP table default	0.12	Not Provided
Roof	R9: Roof to wall (flat ceiling)	SAP table default	0.32	Not Provided

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 m^3/hm^2, Design value	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Room heaters - Electricity	
Efficiency	
Emitter type	Radiators
Flow temperature	
System type	RoomElectric
Manufacturer	
Model	
Commissioning	
Main heating system 2: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	133.23749999999998%
Emitter type	Radiators
Flow temperature	
System type	HeatPumpsWet
Manufacturer	Vaillant Group UK Ltd
Model	aroSTOR 270ltr
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: N/A	
Capacity	270 litres
Declared heat loss	1.77 kWh/day
Primary pipework insulated	Yes
Manufacturer	
Model	
Commissioning	

Waste water heat recovery system 1 - type: N/A	
Efficiency	
Manufacturer	
Model	

6 Controls		
Main heating 1 - type: Programmer and room thermostats		
Function		
Ecodesign class		
Manufacturer		
Model		
Main heating 2 - type: No time or thermostatic control of room temperature		
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	101.25 lm/W	**OK**
External lights control	N/A	

8 Mechanical ventilation		
System type: Decentralised mechanical extract		
Maximum permitted specific fan power	*0.7 W/(l/s)*	
Specific fan power	0.01 W/(l/s)	**OK**
Minimum permitted heat recovery efficiency	*N/A*	
Heat recovery efficiency	N/A	**N/A**
Manufacturer/Model	Vent Axia Ltd Lo-Carbon NBR dMEV C 100	
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	2.025 kWp
Orientation	South West
Pitch	45°
Overshading	None or very little
Manufacturer	Not Provided
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	