Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed using Kaizen SAP 10.2 SAP 10 program, 1.0.1

Date: Sun 23 Feb 2025 22:22:00

Project Information			
Assessed By	Joanna Povey	Building Type	House, End-terrace
OCDEA Registration	KAZN000004	Assessment Date	2025-02-23

Dwelling Details			
Assessment Type	As built	Total Floor Area	97 m^2
Site Reference	037	Plot Reference	037 Parham
Address	4 Cachena Gardens, Whitehouse, MK8 1LU		

Client Details	
Name	Not Given
Company	Not Given
Address	Not Provided, Not Provided, AL9 5HZ

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	*11.04 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	3.35 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*57.81 kWh_{PE}/m^2*	
Dwelling primary energy	35.03 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*34.57 kWh/m^2*	
Dwelling fabric energy efficiency	33.76 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*	0.23	Wl - Dormer (0.26)	OK
Party walls	*0.2*	0	Party Wall (0)	**N/A**
Curtain walls	*1.6*	0	N/A	**N/A**
Floors	*0.18*	0.12	Flr - Ground (0.12)	OK
Roofs	*0.16*	0.13	Flat over Dormer (0.19)	OK
Windows, doors, and roof windows	*1.6*	1.09	Front (1.3)	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: Brick	55.215	0.24
Exposed wall: High stgth block	32.603	0.25
Exposed wall: Wl - Dormer	4.081	0.26
Exposed wall: Wl - Stud Ashlar	10.919	0.1152 **(!)**
Party wall: Party Wall	57.284	0 **(!)**
Ground floor: Flr - Ground	35.517	0.12
Exposed roof: Rf - Ins Joist	13.503	0.09 **(!)**
Exposed roof: Rf - Ins Rafter	12.199	0.16
Exposed roof: Flat over Dormer	2.901	0.19
Exposed roof: Rf - Ashlar behind Stud	9.162	0.1152

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)	2.148	South	0.7	1.1 **(!)**
Front, Windows (1)	2.172	South	1.0	1.3
Rear, Windows (2)	2.172	North		0 **(!)**
Front, Windows (3)	2.443	South	1.0	1.3
Rear, Windows (4)	2.15	North	1.0	1.3
Front, Windows (5)	1.498	South	1.0	1.3
Rear, Windows (6)	2.123	North	1.0	1.3

Name	Area [m^2]	Orientation	Frame factor	U-Value [W/m^2K]
Rear, RoofLights (1)	0.429	North	0.7	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	0.055	Not Provided
External wall	E4: Jamb	Calculated by person with suitable expertise	0.02 **(!)**	Not Provided
External wall	E3: Sill	Calculated by person with suitable expertise	0.015 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.03 **(!)**	Not Provided
External wall	E6: Intermediate floor within a dwelling	Calculated by person with suitable expertise	0.004 **(!)**	Not Provided
External wall	E11: Eaves (insulation at rafter level)	Calculated by person with suitable expertise	0.009 **(!)**	Not Provided
External wall	E12: Gable (insulation at ceiling level)	Calculated by person with suitable expertise	0.05	Not Provided
External wall	E13: Gable (insulation at rafter level)	Calculated by person with suitable expertise	0.053	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.045	Not Provided
External wall	E18: Party wall between dwellings	Calculated by person with suitable expertise	0.038 **(!)**	Not Provided
Party wall	P1: Ground floor	Calculated by person with suitable expertise	0.061	Not Provided
Party wall	P3: Intermediate floor between dwellings (in blocks of flats)	SAP table default	0 **(!)**	Not Provided
Party wall	P4: Roof (insulation at ceiling level)	Calculated by person with suitable expertise	0.069	Not Provided
Party wall	P5: Roof (insulation at rafter level)	Calculated by person with suitable expertise	0.085	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	Calculated by person with suitable expertise	-0.059	Not Provided
Roof	R7: Flat ceiling (inverted)	Calculated by person with suitable expertise	0.12	Not Provided
Roof	R10: All other roof or room-in-roof junctions	Calculated by person with suitable expertise	0.023 **(!)**	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	3.93 m^3/hm^2, Measured value **(!)**	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	332.92655904611462%
Emitter type	Radiators
Flow temperature	55°C
System type	HeatPumpsWet
Manufacturer	Panasonic HVAC UK Ltd
Model	WH-MDC05J3E5
Commissioning	

Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: Cylinder	
Capacity	200 litres
Declared heat loss	1.8 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, room thermostat and TRVs	
Function	
Ecodesign class	
Manufacturer	
Model	
Water heating - type: Cylinder thermostat and HW separately timed	
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
N/A

10 Heat networks
N/A

11 Supporting documentary evidence	
Documentary evidence identified in 11.1 and 11.2 is needed to confirm the data values used for any calculations undertaken, manufacturer declarations made, and tests performed as reflected in this "As built" BREL Compliance Report are correct. 11.1 SAP Conventions, Appendix 1 (documentary evidence) schedules the minimum documentary evidence required. 11.2 Indicative photographic evidence of key stages during construction (guidance within Approved Document L, Volume 1 – Appendix B) that confirms the products identified in this BREL Compliance Report are used in this dwelling, and workmanship is of sufficient quality to support the calculated values claimed in 2a to 2d.	

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 and construction information submitted for this dwelling for the purpose of carrying out the assessment, and that the supporting documentary evidence (identified in 11.1 and 11.2) pursuant to Part L of the Building Regulations 2010 (as amended) has been reviewed in the course of preparing this BREL Compliance Report.

Signed:	Assessor ID: KAZN000004
Name: Joanna Povey	Date: 23 Feb 2025

b. Client Declaration

This declaration by the client is confirmation that the dwelling has been constructed and completed according to the specifications set out in this BREL Compliance Report, and that photographic evidence of key stages, as described in 11.2, has been provided to the Assessor for this dwelling.

Signed:	Organisation: Not Given
Name: Not Given	Date: