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: Wed 05 Mar 2025 14:28:41

Project Information			
Assessed By	Joanna Povey	Building Type	Flat, Detached
OCDEA Registration	KAZN000004	Assessment Date	2025-03-03

Dwelling Details			
Assessment Type	As designed	Total Floor Area	65 m^2
Site Reference	071	Plot Reference	1918 Block A
Address	Address Line 1, ..., CB23 6FE		

Client Details	
Name	Test
Company	Test
Address	Test, 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	Mains gas	
Target carbon dioxide emission rate	*15.02 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	15.17 $kgCO_2/m^2$	**FAIL**
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*79.31 kWh_{PE}/m^2*	
Dwelling primary energy	84.61 kWh_{PE}/m^2	**FAIL**
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*42.06 kWh/m^2*	
Dwelling fabric energy efficiency	40.18 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*	0.26	Brick (0.26)	**OK**
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	Corridor (0.22)	**OK**
Floors	*0.18*	0.12	Flr - Ground (0.12)	**OK**
Roofs	*0.16*	0.16	Flat over Bay (0.16)	**OK**
Windows, doors, and roof windows	*1.6*	1.3	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: Brick	47.665	0.26
Exposed wall: Clad	7.704	0.24
Exposed wall: Corridor	15.213	0.22
Ground floor: Flr - Ground	65.236	0.12
Exposed roof: Flat over Bay	3.816	0.16

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
R Side, Door (1)	2.083	North	0.7	1.1 **(!)**
Front, Windows (1)	4.076	East	1.0	1.3
L Side, Windows (2)	9.117	South	1.0	1.3
Rear, Windows (3)	1.95	West	1.0	1.3
Front, Windows (4)	1.407	East	1.0	1.3
Front, Windows (5)	3.822	East	1.0	1.4

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	0.042	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	0.051	Not Provided
External wall	E7: Party floor between dwellings (in blocks of flats)	Calculated by person with suitable expertise	0.046	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.045	Not Provided
External wall	E17: Corner (inverted - internal area greater than external area)	Calculated by person with suitable expertise	-0.098	Not Provided
External wall	E24: Eaves (insulation at ceiling level - inverted)	Calculated by person with suitable expertise	0.105	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: Boiler with radiators or underfloor heating - Mains gas	
Efficiency	90.75%
Emitter type	Radiators
Flow temperature	55°C
System type	Gas1998OrLater
Manufacturer	Ideal
Model	LOGIC COMBI
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: Cylinder	
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: 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
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: Joanna Povey	Assessor ID: KAZN000004 Date: 05 Mar 2025
b. Client Declaration	
N/A	