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: Thu 20 Mar 2025 10:08:18

Project Information			
Assessed By	Joanna Povey	Building Type	Flat, Semi-detached
OCDEA Registration	KAZN000004	Assessment Date	2025-03-20

Dwelling Details			
Assessment Type	As designed	Total Floor Area	72 m^2
Site Reference	088 Block F	Plot Reference	088 Block F
Address	Address Line 1, ..., BH21 1SF		

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	*14.93 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	4.95 $kgCO_2/m^2$	**OK**
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*78.77 kWh_{PE}/m^2*	
Dwelling primary energy	55.94 kWh_{PE}/m^2	**OK**
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*46.17 kWh/m^2*	
Dwelling fabric energy efficiency	48.06 kWh/m^2	**FAIL**

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*	0.24	10.4N Lift (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*	0.16	Flr - Ground (0.16)	**OK**
Roofs	*0.16*	N/A	N/A	**N/A**
Windows, doors, and roof windows	*1.6*	1.3	Rear (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: 7.3N Brick	17.573	0.22
Exposed wall: 17.5N Corrirdor	15.91	0.25
Exposed wall: 7.3N corrirdor	14.262	0.21
Exposed wall: 10.4N Lift	9.833	0.26
Exposed wall: 17.5N Brick	28.108	0.24
Party wall: Party Wall	10.095	0 **(!)**
Ground floor: Flr - Ground	72.236	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]**
L Side, Door (1)	2.121	South West	0.7	1.2
Rear, Windows (1)	4.493	North West	1.0	1.3
R Side, Windows (2)	7.49	North East	1.0	1.3
Rear, Windows (3)	2.362	North West	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	0.064	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	0.073	Not Provided
External wall	E7: Party floor between dwellings (in blocks of flats)	Calculated by person with suitable expertise	0.043	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.043	Not Provided
External wall	E17: Corner (inverted - internal area greater than external area)	Calculated by person with suitable expertise	-0.092	Not Provided
External wall	E18: Party wall between dwellings	Calculated by person with suitable expertise	0.04	Dense Block
External wall	E25: Staggered party wall between dwellings	Calculated by person with suitable expertise	0.039 **(!)**	Dense Block
Party wall	P1: Ground floor	Calculated by person with suitable expertise	0.176	Dense Block
Party wall	P2: Intermediate floor within a dwelling	SAP table default	0 **(!)**	Not Provided
External wall	E2: Other lintels (including other steel lintels)	Calculated by person with suitable expertise	0.062	Dense Block
External wall	E4: Jamb	Calculated by person with suitable expertise	0.017 **(!)**	Dense Block
External wall	E3: Sill	Calculated by person with suitable expertise	0.012 **(!)**	Dense Block
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.145	Dense Block
External wall	E7: Party floor between dwellings (in blocks of flats)	Calculated by person with suitable expertise	0.045	Dense Block
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.063	Dense Block
External wall	E17: Corner (inverted - internal area greater than external area)	Calculated by person with suitable expertise	-0.106	Dense Block

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: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	212.90630954315955%
Emitter type	Radiators
Flow temperature	45°C
System type	HeatPumpsWet
Manufacturer	JOULE
Model	Modul-Air All-E/ Green Comfort/ 150L Tank
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water		
Cylinder/store - type: Cylinder		
Capacity	150 litres	
Declared heat loss	1.296 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: Centralised mechanical extract		
Maximum permitted specific fan power	*0.7 W/(l/s)*	
Specific fan power	0.41 W/(l/s)	OK
Minimum permitted heat recovery efficiency	*N/A*	
Heat recovery efficiency	N/A	**N/A**
Manufacturer/Model	Joule Ltd Modul-AIR All-E	
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	1.215 kWp
Orientation	South
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:	Assessor ID: KAZN000004
Name: Joanna Povey	Date: 20 Mar 2025

b. Client Declaration
N/A