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: Fri 21 Feb 2025 16:03:52

Project Information			
Assessed By	Joanna Povey	Building Type	Flat, Detached
OCDEA Registration	KAZN000004	Assessment Date	2025-02-21

Dwelling Details			
Assessment Type	As designed	Total Floor Area	142 m^2
Site Reference	87	Plot Reference	Block C1
Address	Address Line 1, ..., XX1X 1XX		

Client Details	
Name	Barratt West London office (BWL)
Company	Barratt West London office (BWL)
Address	Aurora House 71-75 Uxbridge Road, EALING, W5 5SL

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	Heat network	
Target carbon dioxide emission rate	*11.39 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	12.33 $kgCO_2/m^2$	**FAIL**
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*54.27 kWh_{PE}/m^2*	
Dwelling primary energy	57.64 kWh_{PE}/m^2	**FAIL**
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*32.18 kWh/m^2*	
Dwelling fabric energy efficiency	31.25 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*	0.2	Brick w lining (0.28)	**OK**
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	Corridor w lining IWS 303 (0.76)	**OK**
Floors	*0.18*	0.13	Exposed over LGF (0.13)	**OK**
Roofs	*0.16*	N/A	N/A	**N/A**
Windows, doors, and roof windows	*1.6*	1.17	Front (1.2)	**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	34.632	0.18
Exposed wall: Corridor IWS 202	40.557	0.2
Exposed wall: Brick w lining	8.848	0.28
Exposed wall: Corridor w lining IWS 303	5.498	0.76
Ground floor: Exposed over LGF	74.4	0.13

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
Rear, Door (1)	2.058	North East	0.7	1 **(!)**
Front, Windows (1)	10.084	South West	0.7	1.2

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	0.027 **(!)**	Not Provided
External wall	E3: Sill	Calculated by person with suitable expertise	0.026 **(!)**	Not Provided

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E7: Party floor between dwellings (in blocks of flats)	Calculated by person with suitable expertise	0.036 **(!)**	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.075	Not Provided
External wall	E20: Exposed floor (normal)	Calculated by person with suitable expertise	0.256	Not Provided
Party wall	P8: Exposed floor (inverted)	Calculated by person with suitable expertise	0.24	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	2.5 m^3/hm^2, Design value **(!)**	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Heat network - Heat network	
Efficiency	
Emitter type	
Flow temperature	
System type	Community
Manufacturer	
Model	
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: Cylinder	
Capacity	180 litres
Declared heat loss	1.44 kWh/day
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: Charging system linked to use of heating, 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	75 lm/W	OK
External lights control	N/A	

8 Mechanical ventilation		
System type: Balanced whole-house mechanical ventilation with heat recovery		
Maximum permitted specific fan power	*1.5 W/(l/s)*	
Specific fan power	0.88 W/(l/s)	OK
Minimum permitted heat recovery efficiency	*73%*	
Heat recovery efficiency	91%	OK
Manufacturer/Model		
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	0.664118 kWp
Orientation	South
Pitch	Horizontal
Overshading	None or very little
Manufacturer	Not Provided
MCS certificate	

10 Heat networks	
Network name: Community (1)	
Service provision	Space and water heating
Status	New heat network
Carbon dioxide emission factor for delivered heat	0.348 $kgCO_2/kWh$
Primary energy factor for delivered heat	2.149 kWh_{PE}/kWh

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: 21 Feb 2025
b. Client Declaration	
N/A	