Building Regulations England Part L (BREL) Compliance Report

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

Date: Mon 19 Dec 2022 16:30:48

Project Information			
Assessed By	Hayden Shipp	Building Type	Flat, Semi-detached
OCDEA Registration	STRO037489	Assessment Date	2022-12-13

Dwelling Details			
Assessment Type	As designed	Total Floor Area	75 m^2
Site Reference	(401) 2B4P - TF	Plot Reference	2B4P - Top Floor
Address	71-73 Caversham Road, READING, RG1 8JA		

Client Details	
Name	Not Provided
Company	Not Provided
Address	Not Provided, Not Provided, WF10 5QU

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	*9.56 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	4.97 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*51.17 kWh_{PE}/m^2*	
Dwelling primary energy	54.73 kWh_{PE}/m^2	FAIL
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*41.8 kWh/m^2*	
Dwelling fabric energy efficiency	42.1 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*	0.15	External Wall (0.15)	OK
Party walls	*0.2*	0	Party Wall (0)	**N/A**
Curtain walls	*1.6*	0	N/A	**N/A**
Floors	*0.18*	N/A	N/A	**N/A**
Roofs	*0.16*	0.11	EXT Roof (0.11)	OK
Windows, doors, and roof windows	*1.6*	1.29	1 (2.2)	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: External Wall	41.51894	0.15
Exposed wall: Corridor Wall (1)	17.7388	0.15
Party wall: Party Wall	15.849	0 **(!)**
Exposed roof: EXT Roof	74.86	0.11

2c Openings (better than typically expected values are flagged with a subsequent (!))

Name	Area [m^2]	Orientation	Frame factor	U-Value [W/m^2K]
1, Doors	1.7622	South East	N/A	2.2
2, Windows (1)	3.26784	North West	0.9	1.2
3, Windows (1)	5.5167	North West	0.9	1.2
4, Windows (1)	3.26784	North East	0.9	1.2
5, Windows (1)	3.26784	North East	0.9	1.2
6, Windows (1)	3.26784	North East	0.9	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)	Not government-approved scheme	0.3	Not Provided

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E3: Sill	Not government-approved scheme	0.04	Not Provided
External wall	E4: Jamb	Not government-approved scheme	0.05	Not Provided
External wall	E7: Party floor between dwellings (in blocks of flats)	Not government-approved scheme	0.07	Not Provided
External wall	E16: Corner (normal)	Not government-approved scheme	0.06	Not Provided
External wall	E17: Corner (inverted - internal area greater than external area)	Not government-approved scheme	0 **(!)**	Not Provided
External wall	E18: Party wall between dwellings	Not government-approved scheme	0.12	Not Provided
External wall	E9: Balcony between dwellings - wall insulation continuous	Not government-approved scheme	0.02 **(!)**	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 m^3/hm^2, Design value **(!)**	OK
Air permeability test certificate reference	Not Provided	

4 Space heating	
Main heating system 1: Heat network - Heat network	
Efficiency	0.0%
Emitter type	
Flow temperature	
System type	
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	1.85 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: Flat rate charging, programmer, 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	0.5 W/(l/s)	OK
Minimum permitted heat recovery efficiency	*73%*	
Heat recovery efficiency	91%	OK
Manufacturer/Model		
Commissioning	Not Provided / Not Provided	

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	0.8 kWp
Orientation	Horizontal
Pitch	Horizontal
Overshading	None or very little
Manufacturer	Not Provided
MCS certificate	

10 Heat networks	
Network name: Array	
Service provision	Space and water heating
Status	New heat network
Carbon dioxide emission factor for delivered heat	0.05 $kgCO_2/kWh$
Primary energy factor for delivered heat	0.52 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:	Assessor ID: Date:
b. Client Declaration	
N/A	