

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: Thu 09 Feb 2023 14:03:21

Project Information			
Assessed By	Leighton Howe	Building Type	House, Detached
OCDEA Registration	STRO004042	Assessment Date	2022-10-25

Dwelling Details			
Assessment Type	As built	Total Floor Area	134 m ²
Site Reference	AJ-07-AS BUILT	Plot Reference	AJ-07-AS BUILT
Address	2a Longwood Avenue, WATERLOOVILLE, PO8 8HX		

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	Electricity		
Target carbon dioxide emission rate	8.87 kgCO ₂ /m ²		
Dwelling carbon dioxide emission rate	3.94 kgCO ₂ /m ²		OK
1b Target primary energy rate and dwelling primary energy			
Target primary energy	46.48 kWh _{PE} /m ²		
Dwelling primary energy	41.28 kWh _{PE} /m ²		OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	37.6 kWh/m ²		
Dwelling fabric energy efficiency	37.1 kWh/m ²		OK

2a Fabric U-values				
Element	Maximum permitted average U-Value [W/m ² K]	Dwelling average U-Value [W/m ² K]	Element with highest individual U-Value	
External walls	0.26	0.16	dormer walls/cheeks (0.19)	OK
Party walls	0.2	N/A	N/A	N/A
Curtain walls	1.6	N/A	N/A	N/A
Floors	0.18	0.14	ground (0.14)	OK
Roofs	0.16	0.13	pitched (0.16)	OK
Windows, doors, and roof windows	1.6	1.41	7 (1.8)	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 ² K]
Exposed wall: render	82.41	0.16
Exposed wall: dormer walls/cheeks	9.48	0.19
Exposed wall: stud walls	18.4	0.174
Ground floor: ground	77.5	0.14
Exposed roof: ceiling	15	0.1 (!)
Exposed roof: pitched	46.2	0.16
Exposed roof: flat	6.11	0.14
Exposed roof: void	21.14	0.095 (!)

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]
1, Doors	1.89	South	N/A	1.4
2, Windows (1)	6.99	South	0.7	1.4
3, Windows (1)	5.11	North	0.7	1.4
4, Windows (1)	4.53	North	0.7	1.4
5, Windows (1)	2.42	West	0.7	1.4
6, Windows (1)	0.6	West	0.7	1.4
7, Roof windows (1)	0.8	East	0.7	1.8

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
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 , Measured value		OK
Air permeability test certificate reference		Not Provided		
4 Space heating				
Main heating system 1: Heat pump with radiators or underfloor heating - Electricity				
Efficiency	294.3%			
Emitter type	Both radiators and underfloor			
Flow temperature	35°C			
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	210 litres			
Declared heat loss	1.97 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: Time and temperature zone control by device in PCDB				
Function				
Ecodesign class				
Manufacturer				
Model				
Water heating - type: Cylinder thermostat				
Manufacturer				
Model				
7 Lighting				
Minimum permitted light source efficacy	75 lm/W			
Lowest light source efficacy	80 lm/W		OK	
External lights control	N/A			
8 Mechanical ventilation				
System type: N/A				
Maximum permitted specific fan power	N/A			
Specific fan power	N/A		N/A	
Minimum permitted heat recovery efficiency	N/A			
Heat recovery efficiency	N/A		N/A	
Manufacturer/Model				
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: Name:	Assessor ID: Date:
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: Name:	Organisation: Date: