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 13 Dec 2024 09:40:46

Project Information			
Assessed By	Carrie Morris	Building Type	House, Detached
OCDEA Registration	KAZN000005	Assessment Date	2024-12-13

Dwelling Details			
Assessment Type	As built	Total Floor Area	102 m^2
Site Reference	426 - VX019.CL470-1 HAL 4.6	Plot Reference	426 - VX019.CL470-1 HAL 4.6
Address	5 Edwards Place, EXETER, EX1 4BX		

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	Heat network	
Target carbon dioxide emission rate	*13.92 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	12.87 $kgCO_2/m^2$	**OK**
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*63.27 kWh_{PE}/m^2*	
Dwelling primary energy	53.03 kWh_{PE}/m^2	**OK**
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*43.33 kWh/m^2*	
Dwelling fabric energy efficiency	41.34 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*	0.24	Wl - Brick (0.24)	**OK**
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	N/A	**N/A**
Floors	*0.18*	0.12	Flr - Ground (0.12)	**OK**
Roofs	*0.16*	0.09	Rf - Ins Joist (0.09)	**OK**
Windows, doors, and roof windows	*1.6*	1.29	Rear (1.3)	**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: Wl - Brick	100.937	0.24
Exposed wall: Wl - Render	15.026	0.23
Exposed wall: Wl - Clad	14.135	0.24
Ground floor: Flr - Ground	50.968	0.12
Exposed roof: Rf - Ins Joist	50.968	0.09 **(!)**

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)	3.78	North	1.0	1.3
Front, Door (2)	2.102	South	0.7	1.2
Front, Windows (1)	6.505	South	1.0	1.3
Rear, Windows (2)	6.71	North	1.0	1.3
Front, Windows (3)	2.166	South	1.0	1.3
L Side, Windows (4)	0.851	West	1.0	1.3
R Side, Windows (5)	0.756	East	1.0	1.3

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)	Government-approved scheme	0.044	Not Provided
External wall	E4: Jamb	Government-approved scheme	0.01 **(!)**	Not Provided
External wall	E3: Sill	Government-approved scheme	0.009 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Government-approved scheme	0.047	Not Provided
External wall	E6: Intermediate floor within a dwelling	Government-approved scheme	0.003 **(!)**	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.04	Not Provided
External wall	E12: Gable (insulation at ceiling level)	Government-approved scheme	0.044	Not Provided
External wall	E16: Corner (normal)	Government-approved scheme	0.029 **(!)**	Not Provided
External wall	E17: Corner (inverted - internal area greater than external area)	SAP table default	-0.129	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, Measured 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: N/A	
Capacity	N/A
Declared heat loss	N/A
Primary pipework insulated	N/A
Manufacturer	
Model	
Commissioning	
Waste water heat recovery system 1 - type: Instantaneous	
Efficiency	1%
Manufacturer	Q-Blue B.V.
Model	QB1-21
Waste water heat recovery system 2 - type: Instantaneous	
Efficiency	1%
Manufacturer	Q-Blue B.V.
Model	QB1-21

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	
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	1%	**N/A**
Manufacturer/Model	Vent Axia Ltd Lo-Carbon NBR dMEV C 100	
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	1.62 kWp
Orientation	South
Pitch	30°
Overshading	None or very little
Manufacturer	Not Provided
MCS certificate	
Technology type: **Photovoltaic system (2)**	
Peak power	1.215 kWp
Orientation	North
Pitch	30°
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	
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: Carrie Morris	Assessor ID: KAZN000005 Date: 13 Dec 2024

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:	Organisation: Not Given
Name: Not Given	Date: