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 12:41:37

Project Information			
Assessed By	Joanna Povey	Building Type	House, Semi-detached
OCDEA Registration	KAZN000004	Assessment Date	2025-02-21

Dwelling Details			
Assessment Type	As built	Total Floor Area	102 m^2
Site Reference	087 - VC0032 FOR SD RE 6.0	Plot Reference	087 - VC0032 FOR SD RE 6.0
Address	54, Thorsten Way, Congleton, CW12 1TE		

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	Mains gas	
Target carbon dioxide emission rate	*11.45 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	10.42 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*60.03 kWh_{PE}/m^2*	
Dwelling primary energy	56.17 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*36.40 kWh/m^2*	
Dwelling fabric energy efficiency	35.98 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*	0.22	Wl - Dormer (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*	0.12	Flr - Ground (0.12)	OK
Roofs	*0.16*	0.14	Rf - Ins Rafter (0.16)	OK
Windows, doors, and roof windows	*1.6*	1.29	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: Brick	63.665	0.24
Exposed wall: Render	14.741	0.24
Exposed wall: Spandrel Panel	16.607	0.18
Exposed wall: Wl - Dormer	2.559	0.26
Exposed wall: Wl - Stud Ashlar	10.142	0.12 **(!)**
Party wall: Party Wall	60.241	0 **(!)**
Ground floor: Flr - Ground	35.748	0.12
Exposed roof: Rf - Ins Rafter	24.679	0.16
Exposed roof: Flat Dormer	1.997	0.16
Exposed roof: Rf - Ashlar behind Stud	5.588	0.12
Exposed roof: Rf - Ins Joist Ashlar	8.844	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]**
Front, Door (1)	2.148	South West	0.7	1.2
L Side, Windows (1)	0.688	North West	1.0	1.3
Rear, Windows (2)	4.408	North East	1.0	1.3
Front, Windows (3)	4.459	South West	1.0	1.3
Front, Windows (4)	1.44	South West	1.0	1.3

Name	Area [m^2]	Orientation	Frame factor	U-Value [W/m^2K]
Rear, Windows (5)	2.612	North East	1.0	1.3
Rear, RoofLights (1)	0.539	North East	0.7	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	0.044	Not Provided
External wall	E4: Jamb	Calculated by person with suitable expertise	0.022 **(!)**	Not Provided
External wall	E3: Sill	Calculated by person with suitable expertise	0.017 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.046	Not Provided
External wall	E6: Intermediate floor within a dwelling	Calculated by person with suitable expertise	0.003 **(!)**	Not Provided
External wall	E11: Eaves (insulation at rafter level)	Calculated by person with suitable expertise	0.068	Not Provided
External wall	E13: Gable (insulation at rafter level)	Calculated by person with suitable expertise	0.094	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.041	Not Provided
External wall	E18: Party wall between dwellings	Calculated by person with suitable expertise	0.054	Not Provided
Party wall	P1: Ground floor	Calculated by person with suitable expertise	0.048	Not Provided
Party wall	P3: Intermediate floor between dwellings (in blocks of flats)	SAP table default	0 **(!)**	Not Provided
Party wall	P5: Roof (insulation at rafter level)	Calculated by person with suitable expertise	0.04	Not Provided
Roof	R1: Head of roof window	Calculated by person with suitable expertise	0.115	Not Provided
Roof	R2: Sill of roof window	Calculated by person with suitable expertise	0.113	Not Provided
Roof	R3: Jamb of roof window	Calculated by person with suitable expertise	0.041	Not Provided
Roof	R4: Ridge (vaulted ceiling)	Calculated by person with suitable expertise	0.044	Not Provided
Roof	R7: Flat ceiling (inverted)	Calculated by person with suitable expertise	0.025 **(!)**	Not Provided
Roof	R10: All other roof or room-in-roof junctions	Calculated by person with suitable expertise	0.059	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	3.86 m^3/hm^2, Measured value **(!)**	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Boiler with radiators or underfloor heating - Mains gas	
Efficiency	90.75%
Emitter type	Radiators
Flow temperature	55°C
System type	Gas1998OrLater
Manufacturer	Ideal
Model	LOGIC CODE COMBI ESP1
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water		
Cylinder/store - type: Cylinder		
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	69.4%	
Manufacturer	Q-Blue B.V.	
Model	QB1-21	

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

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	0.81 kWp
Orientation	South West
Pitch	45°
Overshading	None or very little
Manufacturer	Not Provided
MCS certificate	

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:	Assessor ID: KAZN000004
Name: Joanna Povey	Date: 21 Feb 2025

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: