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: Wed 05 Mar 2025 14:14:55

Project Information			
Assessed By	Joanna Povey	Building Type	House, Semi-detached
OCDEA Registration	KAZN000004	Assessment Date	2025-03-05

Dwelling Details			
Assessment Type	As built	Total Floor Area	85 m^2
Site Reference	002 Turpins Rise	Plot Reference	002 Turpins Rise
Address	81b Turpins Rise, STEVENAGE, SG2 8QZ		

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	*11.71 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	13.10 $kgCO_2/m^2$	**FAIL**
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*61.19 kWh_{PE}/m^2*	
Dwelling primary energy	68.69 kWh_{PE}/m^2	**FAIL**
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*37.55 kWh/m^2*	
Dwelling fabric energy efficiency	38.91 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*	0.17	Brick (0.17)	**OK**
Party walls	*0.2*	0	Party Wall (0)	**N/A**
Curtain walls	*1.6*	0	N/A	**N/A**
Floors	*0.18*	0.16	Flr - Ground (0.16)	**OK**
Roofs	*0.16*	0.12	Rf - Ins Joist (0.12)	**OK**
Windows, doors, and roof windows	*1.6*	1.53	front (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	70.819	0.17
Party wall: Party Wall	47.41	0 **(!)**
Ground floor: Flr - Ground	42.349	0.16
Exposed roof: Rf - Ins Joist	42.349	0.12

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)	1.975	North East	0.7	1.4
front, Array	2.1	East	N/A	2
drrr, Array	2.11	North	N/A	2
Front, Windows (1)	6.013	North East	0.6	1.4
R Side, Windows (2)	0.411	North West	0.6	1.4
Rear, Windows (3)	4.239	South West	0.6	1.4
Rear, Windows (4)	3.289	South West	0.6	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)	Government-approved scheme	0.067	Keystone
External wall	E4: Jamb	Government-approved scheme	0.023 **(!)**	Not Provided
External wall	E3: Sill	Government-approved scheme	0.019 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Government-approved scheme	0.066	Not Provided
External wall	E6: Intermediate floor within a dwelling	Government-approved scheme	0.001 **(!)**	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.05	Not Provided
External wall	E12: Gable (insulation at ceiling level)	Government-approved scheme	0.03 **(!)**	Not Provided
External wall	E16: Corner (normal)	Government-approved scheme	0.037 **(!)**	Not Provided
External wall	E18: Party wall between dwellings	Government-approved scheme	0.031 **(!)**	Not Provided
Party wall	P1: Ground floor	Government-approved scheme	0.042	Not Provided
Party wall	P3: Intermediate floor between dwellings (in blocks of flats)	SAP table default	0 **(!)**	Not Provided
Party wall	P4: Roof (insulation at ceiling level)	Government-approved scheme	0.033 **(!)**	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	5 m^3/hm^2, Design value	**OK**
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Boiler with radiators or underfloor heating - Mains gas	
Efficiency	177.2%
Emitter type	Radiators
Flow temperature	55°C
System type	Gas1998OrLater
Manufacturer	
Model	
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	1.4 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: 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: 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	1%	**N/A**
Manufacturer/Model		
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	2.61 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: Name: Joanna Povey	Assessor ID: KAZN000004 Date: 05 Mar 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: Name: Not Given	Organisation: Not Given Date: