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: Mon 09 Dec 2024 13:27:11

Project Information			
Assessed By	Joanna Povey	Building Type	House, Detached
OCDEA Registration	KAZN000004	Assessment Date	2024-12-09

Dwelling Details			
Assessment Type	As built	Total Floor Area	94 m^2
Site Reference	Plot 9	Plot Reference	Plot 9
Address	87 The Causeway, BEDFORD, MK43 7LU		

Client Details	
Name	DJS Building Solutions
Company	DJS Building Solutions
Address	Unit 24 Station Rd, Ampthill, BEDFORD, MK45 2QY

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	*11.82 kgCO_2/m^2*	
Dwelling carbon dioxide emission rate	5.13 kgCO_2/m^2	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*61.86 kWh$_{PE}$/m^2*	
Dwelling primary energy	53.70 kWh$_{PE}$/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*41.91 kWh/m^2*	
Dwelling fabric energy efficiency	38.05 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*	0.16	Wl - 1 (0.16)	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*	0.11	Rf - Ins Joist (0.11)	OK
Windows, doors, and roof windows	*1.6*	1.26	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: Wl - 1	113.394	0.16
Ground floor: Flr - Ground	46.825	0.12
Exposed roof: Rf - Ins Joist	46.825	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)	2.126	South	0.7	1.1 **(!)**
Rear, Door (2)	7.815	North	0.7	1.4
Front, Windows (1)	2.467	South	0.7	1.2
L Side, Windows (2)	4.867	West	0.7	1.2
R Side, Windows (3)	6.652	East	0.7	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)	Government-approved scheme	0.057	Not Provided
External wall	E4: Jamb	Government-approved scheme	0.009 **(!)**	Not Provided
External wall	E3: Sill	Government-approved scheme	0.014 **(!)**	Not Provided

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E5: Ground floor (normal)	Government-approved scheme	0.044	Not Provided
External wall	E6: Intermediate floor within a dwelling	Government-approved scheme	0.005 **(!)**	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.034 **(!)**	Not Provided
External wall	E12: Gable (insulation at ceiling level)	Government-approved scheme	0.052	Not Provided
External wall	E16: Corner (normal)	Government-approved scheme	0.032 **(!)**	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, Design value	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	
Emitter type	Radiators
Flow temperature	55°C
System type	HeatPumpsWet
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	1.53 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 arrangement of plumbing and electrical services	
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

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:	Assessor ID: KAZN000004
Name: Joanna Povey	Date: 09 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: DJS Building Solutions
Name: DJS Building Solutions	Date: