Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Fri 13 Jun 2025 08:19:47

Project Information			
Assessed By	Malcolm Lisle	Building Type	House, End-terrace
OCDEA Registration	EES/007070	Assessment Date	2025-06-13

Dwelling Details			
Assessment Type	As built	Total Floor Area	108 m^2
Site Reference	P22691(6) Mount P	Plot Reference	As Built
Address	48, Pleasant Place, Reading, RG1 2TD		

Client Details	
Name	Jay Zaman
Company	SAPS4U
Address	SAPS4U, Knowle House, 4 Norfolk Park Road, Sheffield, S2 3QE

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	*12.27 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	12.1 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*64.33 kWh_{PE}/m^2*	
Dwelling primary energy	63.75 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*42.9 kWh/m^2*	
Dwelling fabric energy efficiency	39.7 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*	0.13	Walls (1) (0.13)	OK
Party walls	*0.2*	0	Party Wall (1) (0)	**N/A**
Curtain walls	*1.6*	0	N/A	**N/A**
Floors	*0.18*	0.13	Ground Floor (0.13)	OK
Roofs	*0.16*	0.16	Roof (1) (0.18)	OK
Windows, doors, and roof windows	*1.6*	1.53	Rooflights (1.7)	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: Walls (1)	121.57	0.13 **(!)**
Party wall: Party Wall (1)	54.12	0 **(!)**
Ground floor: Ground Floor, Ground Floor	38.07	0.13
Exposed roof: Roof (1)	29.41	0.18
Exposed roof: Roof (2)	14.25	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]
Windows, Windows/Doors	3.16	North	1.0	1.5
Windows, Windows/Doors	1.35	South	1.0	1.5
Windows, Windows/Doors	6.65	South East	1.0	1.5
Glazed Doors, Windows/Doors	6.48	North	1.0	1.5
Front Door, Windows/Doors	1.89	South East	1.0	1.5
Rooflights, Rooflights	4.06	East	0.7	1.7
Glazed Doors, Windows/Doors	4.5	South	1.0	1.5

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))

Building part **1**: Thermal bridging calculated from linear thermal transmittances for each junction

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E1: Steel lintel with perforated steel base plate	Calculated by person with suitable expertise	0.044	ROI Details
External wall	E3: Sill	Calculated by person with suitable expertise	0.064	
External wall	E4: Jamb	Calculated by person with suitable expertise	0.048	
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.051	
External wall	E6: Intermediate floor within a dwelling	Calculated by person with suitable expertise	0.013 **(!)**	
External wall	E11: Eaves (insulation at rafter level)	Calculated by person with suitable expertise	0.054	
External wall	E13: Gable (insulation at rafter level)	Calculated by person with suitable expertise	0.062	
External wall	E15: Flat roof with parapet	Calculated by person with suitable expertise	0.03 **(!)**	
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.03 **(!)**	
External wall	E18: Party wall between dwellings	Calculated by person with suitable expertise	0.087	
External wall	E25: Staggered party wall between dwellings	SAP table default	0.24	
Party wall	P1: Ground floor	Calculated by person with suitable expertise	0.032 **(!)**	
Party wall	P2: Intermediate floor within a dwelling	SAP table default	0 **(!)**	
Party wall	P4: Roof (insulation at ceiling level)	SAP table default	0.48	
Party wall	P5: Roof (insulation at rafter level)	SAP table default	0.48	
Roof	R1: Head of roof window	Calculated by person with suitable expertise	0.024 **(!)**	
Roof	R2: Sill of roof window	Calculated by person with suitable expertise	0.024 **(!)**	
Roof	R3: Jamb of roof window	Calculated by person with suitable expertise	0.024 **(!)**	
Roof	R4: Ridge (vaulted ceiling)	Calculated by person with suitable expertise	0.012 **(!)**	
External wall	E17: Corner (inverted - internal area greater than external area)	Calculated by person with suitable expertise	-0.004 **(!)**	

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	3.29 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	89.0%
Emitter type	Radiators
Flow temperature	
System type	Combi boiler
Manufacturer	Ideal Boilers
Model	ATLANTIC COMBI
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: 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	91.66666666666667 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	
Technology type: **Photovoltaic system (1)**	
Peak power	2 kWp
Orientation	West
Pitch	30°
Overshading	None or very little
Manufacturer	
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:	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: