

Building Regulations England Part L (BREL) Compliance Report

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

Date: Mon 23 Feb 2026 14:25:37

Project Information			
Assessed By	Daniel Towns	Building Type	House, Detached
OCDEA Registration	EES/024536	Assessment Date	2026-02-23

Dwelling Details			
Assessment Type	As designed	Total Floor Area	103 m ²
Site Reference	New Dwelling	Plot Reference	New Dwelling
Address			

Client Details	
Name	-
Company	-
Address	-, -, -

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	12.04 kgCO ₂ /m ²		
Dwelling carbon dioxide emission rate	4.31 kgCO ₂ /m ²		OK

1b Target primary energy rate and dwelling primary energy			
Target primary energy	63.07 kWh _{PE} /m ²		
Dwelling primary energy	46.74 kWh _{PE} /m ²		OK

1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	45.6 kWh/m ²		
Dwelling fabric energy efficiency	44.9 kWh/m ²		OK

2a Fabric U-values				
Element	Maximum permitted average U-Value [W/m ² K]	Dwelling average U-Value [W/m ² K]	Element with highest individual U-Value	
External walls	0.26	0.16	Walls (1) (0.18)	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	Ground Floor (0.12)	OK
Roofs	0.16	0.14	Roof (2) (0.15)	OK
Windows, doors, and roof windows	1.6	1.4	East - H/G Door (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 ² K]
Exposed wall: Walls (1)	91.56	0.18
Exposed wall: Walls (2)	9.48	0.15
Exposed wall: Walls (3)	23.49	0.11 (!)
Ground floor: Ground Floor, Ground Floor	55.14	0.12
Exposed roof: Roof (1)	8.12	0.11
Exposed roof: Roof (2)	54.52	0.15
Exposed roof: Roof (3)	7.34	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 ² K]
East - H/G Door, H/G Door	2.05	East	N/A	1.4
West - H/G Door, H/G Door	2.25	West	N/A	1.4
East - Window, Window	1.96	East	0.7	1.4
North - Window, Window	2.08	North	0.7	1.4
South - Window, Window	5.91	South	0.7	1.4
West - Window, Window	4.48	West	0.7	1.4
West - Window, Window	2.1	West	0.7	1.4
West - Roof Window, Roof Window	1.5	West	0.7	1.4

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	E2: Other lintels (including other steel lintels)	Not government-approved scheme	0.026 (!)	RCD
External wall	E3: Sill	Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb	Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)	Not government-approved scheme	0.068	RCD
External wall	E6: Intermediate floor within a dwelling	Not government-approved scheme	0.001 (!)	RCD
External wall	E11: Eaves (insulation at rafter level)	Not government-approved scheme	0.018 (!)	RCD
External wall	E12: Gable (insulation at ceiling level)	Not government-approved scheme	0.037 (!)	RCD
External wall	E13: Gable (insulation at rafter level)	Not government-approved scheme	0.039 (!)	RCD
External wall	E16: Corner (normal)	Not government-approved scheme	0.04	RCD
Roof	R1: Head of roof window	SAP table default	0.24	
Roof	R2: Sill of roof window	SAP table default	0.24	
Roof	R3: Jamb of roof window	SAP table default	0.24	
Roof	R4: Ridge (vaulted ceiling)	SAP table default	0.12	
Roof	R5: Ridge (inverted)	SAP table default	0.12	
Roof	R6: Flat ceiling	SAP table default	0.12	
Roof	R7: Flat ceiling (inverted)	SAP table default	0.12	
Roof	R8: Roof to wall (rafter)	SAP table default	0.12	
3 Air permeability (better than typically expected values are flagged with a subsequent (!))				
Maximum permitted air permeability at 50Pa		8 m³/hm²		
Dwelling air permeability at 50Pa		3 m³/hm², Design value (!)		OK
Air permeability test certificate reference				
4 Space heating				
Main heating system 1: Heat pump with radiators or underfloor heating - Electricity				
Efficiency		219.3%		
Emitter type		Both radiators and underfloor		
Flow temperature		55°C		
System type		Air source heat pump		
Manufacturer				
Model				
Commissioning				
Secondary heating system: N/A				
Fuel		N/A		
Efficiency		N/A		
Commissioning				
5 Hot water				
Cylinder/store - type: Cylinder				
Capacity		200 litres		
Declared heat loss		2.06 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	80 lm/W	OK
External lights control	N/A	
8 Mechanical ventilation		
System type: Balanced whole-house mechanical ventilation with heat recovery		
Maximum permitted specific fan power	1.5 W/(l/s)	
Specific fan power	0.75 W/(l/s)	OK
Minimum permitted heat recovery efficiency	73%	
Heat recovery efficiency	88%	OK
Manufacturer/Model	MRXBOXAB-ECO3	
Commissioning		
9 Local generation		
Technology type: Photovoltaic system (1)		
Peak power	1 kWp	
Orientation	West	
Pitch	45°	
Overshading	None or very little	
Manufacturer		
MCS certificate		
10 Heat networks		
N/A		
11 Supporting documentary evidence		
N/A		
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 information submitted for this dwelling for the purpose of carrying out the "As designed" assessment, and that the supporting documentary evidence (SAP Conventions, Appendix 1 (documentary evidence) schedules the minimum documentary evidence required) has been reviewed in the course of preparing this BREL Compliance Report.		
Signed:	Assessor ID:	
Name:	Date:	
b. Client Declaration		
N/A		