

Building Regulations England Part L (BREL) Compliance Report

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

Date: Wed 20 Dec 2023 13:33:18

Project Information			
Assessed By	David Beard	Building Type	House, Detached
OCDEA Registration	EES/022585	Assessment Date	2023-12-20

Dwelling Details			
Assessment Type	As designed	Total Floor Area	105 m ²
Site Reference	Boydell Court NW8 with ASHP	Plot Reference	1
Address	New Dwelling Boydell Court, London, NW8 6NH		

Client Details	
Name	Client
Company	Company
Address	Address, Town, AA11 1AA

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	12.25 kgCO ₂ /m ²		
Dwelling carbon dioxide emission rate	6.03 kgCO ₂ /m ²		OK
1b Target primary energy rate and dwelling primary energy			
Target primary energy	64.2 kWh _{PE} /m ²		
Dwelling primary energy	63.58 kWh _{PE} /m ²		OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	45.3 kWh/m ²		
Dwelling fabric energy efficiency	45.2 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	0.18	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	0.13	Floor 1 (0.13)	OK
Roofs	0.16	0.09	Roof (1) (0.09)	OK
Windows, doors, and roof windows	1.6	1.18	2 (1.2)	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 ² K]
Exposed wall: Walls (1)	146.9475	0.18
Ground floor: Floor 1, Floor 1	52.5	0.13
Exposed roof: Roof (1)	52.5	0.09 (!)

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]
1, Opening Type 1	1.89	North	N/A	1 (!)
2, Opening Type 2	2.4	South	0.7	1.2
3, Opening Type 2	0.735	South	0.7	1.2
4, Opening Type 2	0.735	South	0.7	1.2
5, Opening Type 2	0.735	West	0.7	1.2
6, Opening Type 2	1.38	North	0.7	1.2
7, Opening Type 2	1.38	North	0.7	1.2
8, Opening Type 2	1.38	North	0.7	1.2
9, Opening Type 2	1.38	North	0.7	1.2
10, Opening Type 2	1.2075	North	0.7	1.2
11, Opening Type 2	1.38	East	0.7	1.2
12, Opening Type 2	2.4	East	0.7	1.2
13, Opening Type 2	2.4	East	0.7	1.2

Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]
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	0.3	
External wall	E3: Sill	Government-approved scheme	0.04	
External wall	E4: Jamb	Government-approved scheme	0.05	
External wall	E5: Ground floor (normal)	Government-approved scheme	0.16	
External wall	E6: Intermediate floor within a dwelling	Government-approved scheme	0.07	
External wall	E14: Flat roof	Government-approved scheme	0.04	
External wall	E16: Corner (normal)	Government-approved scheme	0.09	
External wall	E17: Corner (inverted - internal area greater than external area)	Government-approved scheme	-0.09	
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 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	341.2%			
Emitter type	Radiators			
Flow temperature	35°C			
System type	Heat Pump			
Manufacturer	Vaillant Group UK Ltd			
Model	aroTHERM			
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	2.4 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: N/A				
Manufacturer				
Model				
7 Lighting				
Minimum permitted light source efficacy	75 lm/W			
Lowest light source efficacy	100 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		
N/A		
10 Heat networks		
N/A		
11 Supporting documentary evidence		
N/A		
12 Declarations		
a. Assessor Declaration		
<p>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.</p>		
Signed:	Assessor ID:	
Name:	Date:	
b. Client Declaration		
N/A		