

# Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed by Stroma SAP 10.2 SAP 10 program, 10.2

Date: Wed 20 Mar 2024 12:17:15

Project Information			
Assessed By	Webb Yates Engineers	Building Type	Bungalow, Detached
OCDEA Registration	STRO037816	Assessment Date	2024-03-18

Dwelling Details			
Assessment Type	As designed	Total Floor Area	143 m <sup>2</sup>
Site Reference	56a Church Hill	Plot Reference	J5129
Address	56a Church Hill, LONDON, N21 1JA		

Client Details	
Name	Not Provided
Company	Not Provided
Address	Not Provided, Not Provided, WF10 5QU

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	11.67 kgCO <sub>2</sub> /m <sup>2</sup>	
Dwelling carbon dioxide emission rate	5.97 kgCO <sub>2</sub> /m <sup>2</sup>	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	64.02 kWh <sub>PE</sub> /m <sup>2</sup>	
Dwelling primary energy	63.07 kWh <sub>PE</sub> /m <sup>2</sup>	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	64 kWh/m <sup>2</sup>	
Dwelling fabric energy efficiency	58.3 kWh/m <sup>2</sup>	OK

2a Fabric U-values				
Element	Maximum permitted average U-Value [W/m <sup>2</sup> K]	Dwelling average U-Value [W/m <sup>2</sup> K]	Element with highest individual U-Value	
External walls	0.26	0.13	Living & Dining (0.13)	OK
Party walls	0.2	N/A	N/A	N/A
Curtain walls	1.6	N/A	N/A	N/A
Floors	0.18	0.1	Ground (0.1)	OK
Roofs	0.16	0.09	Roof (0.09)	OK
Windows, doors, and roof windows	1.6	1	1 (1)	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 <sup>2</sup> ]	U-Value [W/m <sup>2</sup> K]
Exposed wall: Living & Dining	13.05911	0.13 (!)
Exposed wall: Kitchen	16.314	0.13 (!)
Exposed wall: Utility / Pantry	12.8	0.13 (!)
Exposed wall: Entry Hall	3.251079	0.13 (!)
Exposed wall: WC	10.5	0.13 (!)
Exposed wall: Studio	0	0.13 (!)
Exposed wall: Library / Corridor	44.2	0.13 (!)
Exposed wall: Bedroom 1	0	0.13 (!)
Exposed wall: Bedroom 2	8.7	0.13 (!)
Exposed wall: Ensuite 2	6.5	0.13 (!)
Exposed wall: Master Bathroom	25.9177	0.13 (!)
Exposed wall: Dressing	18.4	0.13 (!)
Exposed wall: Master Bedroom	30.65	0.13 (!)
Upper floor: Ground	143	0.1 (!)
Exposed roof: Roof	129.003324	0.09 (!)

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	Area [m <sup>2</sup> ]	Orientation	Frame factor	U-Value [W/m <sup>2</sup> K]
1, Doors	2.148921	North East	N/A	1 (!)
2, Windows (1)	11.63709	North West	0.9	1 (!)

Name	Area [m <sup>2</sup> ]	Orientation	Frame factor	U-Value [W/m <sup>2</sup> K]
3, Windows (1)	2.086	South East	0.9	1 (!)
4, Windows (1)	8.908	South East	0.9	1 (!)
5, Windows (1)	0.8262	South East	0.9	1 (!)
6, Windows (1)	0.8262	South East	0.9	1 (!)
7, Windows (1)	0.8262	South East	0.9	1 (!)
8, Windows (1)	0.8262	South East	0.9	1 (!)
9, Windows (1)	1.4823	North West	0.9	1 (!)
10, Windows (1)	6.699	South East	0.9	1 (!)
11, Windows (1)	7.31808	North West	0.9	1 (!)
12, Windows (1)	7.31808	North West	0.9	1 (!)
13, Windows (1)	10.05	South East	0.9	1 (!)
10, Roof windows (1)	4.0625	South West	0.9	1 (!)
11, Roof windows (1)	2.152206	South West	0.9	1 (!)
12, Roof windows (1)	2.52168	South West	0.9	1 (!)
13, Roof windows (1)	2.52168	South West	0.9	1 (!)
14, Roof windows (1)	2.73861	South West	0.9	1 (!)

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

Building part 1 - **Main Dwelling**: SAP default y-value (0.2 W/m<sup>2</sup>K) used for thermal bridging

### 3 Air permeability (better than typically expected values are flagged with a subsequent (!))

Maximum permitted air permeability at 50Pa	8 m <sup>3</sup> /hm <sup>2</sup>	
Dwelling air permeability at 50Pa	4 m <sup>3</sup> /hm <sup>2</sup> , Design value	OK
Air permeability test certificate reference	Not Provided	

### 4 Space heating

**Main heating system 1**: Heat pump with radiators or underfloor heating - Electricity

Efficiency	289.8%
Emitter type	Underfloor
Flow temperature	45°C
System type	
Manufacturer	
Model	
Commissioning	

**Secondary heating system**: N/A

Fuel	N/A
Efficiency	N/A
Commissioning	

### 5 Hot water

**Cylinder/store** - type: Cylinder

Capacity	300 litres
Declared heat loss	2.09 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	95 lm/W	OK
External lights control	N/A	

8 Mechanical ventilation		
<b>System type:</b> Balanced whole-house mechanical ventilation with heat recovery		
<i>Maximum permitted specific fan power</i>	1.5 W/(l/s)	
Specific fan power	1.44 W/(l/s)	OK
<i>Minimum permitted heat recovery efficiency</i>	73%	
Heat recovery efficiency	85%	OK
Manufacturer/Model		
Commissioning	Not Provided / Not Provided	
9 Local generation		
N/A		
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		