

Building Regulations England Part L (BREL) Compliance Report

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

Date: Mon 30 Oct 2023 12:24:51

Project Information			
Assessed By	Damian Selim	Building Type	Flat, Detached
OCDEA Registration	EES/022740	Assessment Date	2023-10-30

Dwelling Details			
Assessment Type	As designed	Total Floor Area	49 m ²
Site Reference	Green Lanes 368 Flat C	Plot Reference	Flat C
Address	368 Flat C Green Lanes, London, N13 5PE		

Client Details	
Name	Shuang Yun Building Contractor
Company	Shuang Yun Building Contractor
Address	9-11 High Beech Road, Loughton, IG10 4BN

1a Target emission rate and dwelling emission rate		
Fuel for main heating system	Electricity	
Target carbon dioxide emission rate	14.26 kgCO ₂ /m ²	
Dwelling carbon dioxide emission rate	8.96 kgCO ₂ /m ²	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	76.16 kWh _{PE} /m ²	
Dwelling primary energy	97.47 kWh _{PE} /m ²	FAIL
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	33.9 kWh/m ²	
Dwelling fabric energy efficiency	50.4 kWh/m ²	FAIL

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	N/A	N/A	N/A
Roofs	0.16	0.15	Roof (1) (0.15)	OK
Windows, doors, and roof windows	1.6	1.06	Bed Velux (1.4)	OK
Rooflights	2.2	1.4	Hall Rooflight, South (1.4)	OK

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)	15.7951	0.18	
Exposed wall: Walls (2)	4.35	0.18	
Exposed wall: Walls (3)	13.57	0.18	
Exposed wall: Walls (4)	23.68	0.18	
Exposed wall: Walls (5)	7.672	0.18	
Exposed roof: Roof (1)	17.21	0.15	
Exposed roof: Roof (2)	10.01	0.15	
Exposed roof: Roof (3)	9.92	0.15	
Exposed roof: Roof (4)	11.666	0.15	

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]
Kitchen, Window	1.3689	East	0.7	1.1 (!)
Suite, Window	0.468	East	0.7	1.1 (!)
Kitchen, Window	1.521	North	0.7	1.1 (!)
Front Door, Solid Door	1.785	North	N/A	0.6 (!)
Bed Velux, Velux	0.972	West	0.7	1.4
Bed Velux, Velux	0.972	West	0.7	1.4
Hall Rooflight, Rooflight	0.49	South	0.7	1.4

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 ² 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 ³ /hm ²	
Dwelling air permeability at 50Pa	8 m ³ /hm ² , Design value	OK
Air permeability test certificate reference		
4 Space heating		
Main heating system 1: Boiler with radiators or underfloor heating - Electricity		
Efficiency	100.0%	
Emitter type	Radiators	
Flow temperature		
System type	Direct acting electric boiler	
Manufacturer		
Model		
Commissioning		
Secondary heating system: N/A		
Fuel	N/A	
Efficiency	N/A	
Commissioning		
5 Hot water		
Cylinder/store - type: Cylinder		
Capacity	170 litres	
Declared heat loss	1.2 kWh/day	
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		
Manufacturer		
Model		
7 Lighting		
Minimum permitted light source efficacy	75 lm/W	
Lowest light source efficacy	75 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	1 kWp		
Orientation	Horizontal		
Pitch	Horizontal		
Overshading	1 (overshading factor calculated according to MCS)		
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.			
<table border="1"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Signed: <i>D Selim</i></p> <p>Name: Damian Selim</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Assessor ID: L673</p> <p>Date: 30th October 2023</p> </td> </tr> </table>		<p>Signed: <i>D Selim</i></p> <p>Name: Damian Selim</p>	<p>Assessor ID: L673</p> <p>Date: 30th October 2023</p>
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b. Client Declaration			
N/A			