

Building Regulations England Part L (BREL) Compliance Report

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

Date: Thu 21 Dec 2023 13:06:05

Project Information			
Assessed By	Graham Suttill	Building Type	Flat, Semi-detached
OCDEA Registration	EES/027435	Assessment Date	2023-12-21

Dwelling Details			
Assessment Type	As designed	Total Floor Area	91 m ²
Site Reference	Apartment 2	Plot Reference	Apartment 2 Be Green
Address	95 Apartment 1 Avenue Road, London, NW8 6HY		

Client Details	
Name	Wendy Warren
Company	Carnell Warren Associates Ltd
Address	Duke House, Duke Street, Woking, GU21 5BA

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	Heat network	
Target carbon dioxide emission rate	18.38 kgCO ₂ /m ²	
Dwelling carbon dioxide emission rate	30.27 kgCO ₂ /m ²	FAIL
1b Target primary energy rate and dwelling primary energy		
Target primary energy	98.93 kWh _{PE} /m ²	
Dwelling primary energy	168.27 kWh _{PE} /m ²	FAIL
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	36.9 kWh/m ²	
Dwelling fabric energy efficiency	73.3 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	0.3	Walls (1) (0.3)	FAIL
Party walls	0.2	0	Party Wall (1) (0)	N/A
Curtain walls	1.6	0	N/A	N/A
Floors	0.18	0.25	Basement Floor (0.25)	FAIL
Roofs	0.16	0.15	Roof (1) (0.15)	OK
Windows, doors, and roof windows	1.6	1.4	N Windows (1.4)	OK
Rooflights	2.2	1.4	RL, East (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)	21.84	0.3
Exposed wall: Walls (2)	31.75	0.3
Exposed wall: Walls (3)	1.42	0.18
Party wall: Party Wall (1)	30.01	0 (!)
Ground floor: Basement Floor, Basement Floor	91.16	0.25
Exposed roof: Roof (1)	2.29	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]
N Windows, Windows	2.25	North	0.7	1.4
N Glazed Doors, Glazed Doors	3.61	North	0.7	1.4
S Windows, Windows	4.56	South	0.7	1.4
S Glazed Doors, Windows	5.22	South	0.7	1.4
W Windows, Glazed Doors	3.36	West	0.7	1.4
W Glazed Doors, Glazed Doors	8.46	West	0.7	1.4
RL, Rooflight	1.15	East	0.7	1.4
W Glazed Door New, Glazed Doors	2.79	West	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	6 m ³ /hm ² , Design value	OK
Air permeability test certificate reference		

4 Space heating		
Main heating system 1: Heat network - Heat network		
Efficiency		
Emitter type		
Flow temperature		
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	1.8 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: Charging system linked to use of heating, programmer, and TRVs		
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	75 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	0.68 W/(l/s)	OK
Minimum permitted heat recovery efficiency	73%	
Heat recovery efficiency	88%	OK
Manufacturer/Model	MRXBOXAB-ECO5	
Commissioning		

9 Local generation		
N/A		

10 Heat networks		
Network name: Existing Comunal Boilers		
Service provision	Space and water heating	
Status	Existing heat network	
<i>Maximum permitted carbon dioxide emission factor</i>	0.35 kgCO ₂ /kWh	
Carbon dioxide emission factor for delivered heat	0.223 kgCO ₂ /kWh	OK
<i>Maximum permitted primary energy factor</i>	N/A	
Primary energy factor for delivered heat	1.205 kWh _{PE} /kWh	
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		