

# Building Regulations England Part L (BREL) Compliance Report

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

Date: Tue 13 Aug 2024 20:04:07

Project Information			
Assessed By	Ondrej Gajdos	Building Type	House, End-terrace
OCDEA Registration	EES/027207	Assessment Date	2024-08-13

Dwelling Details			
Assessment Type	As designed	Total Floor Area	73 m <sup>2</sup>
Site Reference	HOUSE	Plot Reference	Be Green
Address	Gondar Gardens, NW6 1EW		

Client Details	
Name	Client
Company	Client
Address	AddressLine1, Town, Postcode

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	13.44 kgCO <sub>2</sub> /m <sup>2</sup>		
Dwelling carbon dioxide emission rate	-0.51 kgCO <sub>2</sub> /m <sup>2</sup>		OK
1b Target primary energy rate and dwelling primary energy			
Target primary energy	70.43 kWh <sub>PE</sub> /m <sup>2</sup>		
Dwelling primary energy	17.94 kWh <sub>PE</sub> /m <sup>2</sup>		OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	44.7 kWh/m <sup>2</sup>		
Dwelling fabric energy efficiency	42.0 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	0.18	Walls (1) (0.18)	OK
Party walls	0.2	0	Party Wall (1) (0)	N/A
Curtain walls	1.6	0	N/A	N/A
Floors	0.18	0.13	ground (0.13)	OK
Roofs	0.16	0.11	Roof (1) (0.11)	OK
Windows, doors, and roof windows	1.6	1.2	3 (1.2)	OK
Rooflights	2.2	1.2	1, East (1.2)	OK

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: Walls (1)	85.4	0.18
Party wall: Party Wall (1)	38.4	0 (!)
Ground floor: ground, ground	35.5	0.13
Upper floor: exposed below 1F, exposed below 1F	1	0.13
Exposed roof: Roof (1)	42.53	0.11

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, 1	2.56	East	0.7	1.2
2, 2	8.04	West	0.7	1.2
3, 3	1.32	West	0.7	1.2
1, 1	1.98	East	0.7	1.2
1, 1	1.615	South	0.7	1.2
2, 2	1.955	South	0.7	1.2

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)	Calculated by person with suitable expertise	0.05	

### 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		

### 4 Space heating

#### Main heating system 1: Room heaters - Electricity

Efficiency	100.0%
Emitter type	
Flow temperature	
System type	Panel, convector or radiant heaters
Manufacturer	
Model	
Commissioning	

#### Main heating system 2: Heat pump with radiators or underfloor heating - Electricity

Efficiency	0.0%
Emitter type	
Flow temperature	
System type	Heat Pump
Manufacturer	GDC Group Ltd
Model	EDL200UK-630
Commissioning	

#### Secondary heating system: N/A

Fuel	N/A
Efficiency	N/A
Commissioning	

### 5 Hot water

#### Cylinder/store - type: N/A

Capacity	N/A
Declared heat loss	N/A
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: Programmer and appliance thermostats

Function	
Ecodesign class	
Manufacturer	
Model	

#### Main heating 2 - type: Not applicable

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	80 lm/W	OK
External lights control	N/A	

8 Mechanical ventilation		
<b>System type:</b> Balanced whole-house mechanical ventilation with heat recovery		
Maximum permitted specific fan power	1.5 W/(l/s)	
Specific fan power	0.55 W/(l/s)	OK
Minimum permitted heat recovery efficiency	73%	
Heat recovery efficiency	90%	OK
Manufacturer/Model	MRXBOXAB-ECO3, MRXBOXAB-ECO3C	
Commissioning		
9 Local generation		
Technology type: <b>Photovoltaic system (1)</b>		
Peak power	4 kWp	
Orientation	South	
Pitch	30°	
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		