

Building Regulations England Part L (BREL) Compliance Report

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

Date: Thu 02 Jul 2026 12:57:41

Project Information			
Assessed By	Benjamin Leech	Building Type	House, End-terrace
OCDEA Registration	EES/027399	Assessment Date	2026-07-02

Dwelling Details			
Assessment Type	As designed	Total Floor Area	73 m ²
Site Reference	73a Keith Road	Plot Reference	Be Green
Address	73a Keith Road, Hayes, UB3 4HP		

Client Details	
Name	Faluck Patel
Company	Self-Employed
Address	C/O Land at Crowsley Road, Lower Shiplake, RG9 3LD

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	11.9 kgCO ₂ /m ²		
Dwelling carbon dioxide emission rate	-0.27 kgCO ₂ /m ²		OK
1b Target primary energy rate and dwelling primary energy			
Target primary energy	62.24 kWh _{PE} /m ²		
Dwelling primary energy	11.9 kWh _{PE} /m ²		OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	39.8 kWh/m ²		
Dwelling fabric energy efficiency	36.6 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	0	Party Wall (1) (0)	N/A
Curtain walls	1.6	0	N/A	N/A
Floors	0.18	0.13	Ground Floor (0.13)	OK
Roofs	0.16	0.11	Roof (1) (0.11)	OK
Windows, doors, and roof windows	1.6	1.17	South Windows (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)	73.28	0.18	
Party wall: Party Wall (1)	50.47	0 (!)	
Ground floor: Ground Floor, Ground Floor	37.26	0.13	
Exposed roof: Roof (1)	35.82	0.11	
Exposed roof: Roof (2)	1.44	0.11	

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]
South Door, Solid Door	1.79	South	N/A	1 (!)
South Windows, Window	3.33	South	1.0	1.2
North Glazing, Window	7.86	North	1.0	1.2

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))				
Building part 1: 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)	Not government-approved scheme	0.214	MHF-100-E2-04
External wall	E3: Sill	Not government-approved scheme	0.02 (!)	MHF-100-E3-01

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E4: Jamb	Not government-approved scheme	0.015 (!)	MHF-100-E4-01
External wall	E5: Ground floor (normal)	Not government-approved scheme	0.051	MHF-100-E5-12
Party wall	P1: Ground floor	Not government-approved scheme	0.036 (!)	MHF-100-MPW-P1-12
External wall	E6: Intermediate floor within a dwelling	Not government-approved scheme	0.001 (!)	MHF-100-E6-01
External wall	E24: Eaves (insulation at ceiling level - inverted)	SAP table default	0.15	Default for Inverted Roof
Party wall	P2: Intermediate floor within a dwelling	SAP table default	0 (!)	Default for Internal Floor
External wall	E14: Flat roof	SAP table default	0.16	Default for Flat Roof
External wall	E10: Eaves (insulation at ceiling level)	Not government-approved scheme	0.056	MHF-100-E10-01
Party wall	P4: Roof (insulation at ceiling level)	Not government-approved scheme	0.033 (!)	MHF-100-MPW-P4-01
External wall	E16: Corner (normal)	Not government-approved scheme	0.038 (!)	MHF-100-E16-01
External wall	E18: Party wall between dwellings	Not government-approved scheme	0.04	MHF-100-E18-01

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		5 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	363.6%
Emitter type	Radiators
Flow temperature	35°C
System type	Heat Pump
Manufacturer	Grant Engineering (UK) Ltd
Model	Aerona
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: Cylinder	
Capacity	180 litres
Declared heat loss	1.21 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	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		
Technology type: Photovoltaic system (1)		
Peak power	2.7 kWp	
Orientation	West	
Pitch	30°	
Overshading	None or very little	
Manufacturer		
MCS certificate		
Technology type: Photovoltaic system (2)		
Peak power	0.45 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		