Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed using Kaizen SAP 10.2 SAP 10 program, 1.0.1

Date: Wed 12 Feb 2025 09:47:04

Project Information			
Assessed By	Connor Campbell	Building Type	Maisonette, Detached
OCDEA Registration	KAZN000009	Assessment Date	2025-02-12

Dwelling Details			
Assessment Type	As designed	Total Floor Area	91 m^2
Site Reference	143	Plot Reference	143 - FF TRE DET BO BR 7.2
Address	143 - FF TRE DET BO BR 7.2, ..., XX1X 1XX		

Client Details	
Name	Bloor Homes South Midlands
Company	Bloor Homes South Midlands
Address	Ashby Road Measham, SWADLINCOTE, DE12 7JP

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	*10.20 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	3.51 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*53.30 kWh_{PE}/m^2*	
Dwelling primary energy	36.87 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*32.87 kWh/m^2*	
Dwelling fabric energy efficiency	31.49 kWh/m^2	OK

2a Fabric U-values				
Element	***Maximum permitted average U-Value [W/m^2K]***	**Dwelling average U-Value [W/m^2K]**	**Element with highest individual U-Value**	
External walls	*0.26*	0.2	Wl - Clad (0.22)	OK
Party walls	*0.2*	0	Party Wall (0)	**N/A**
Curtain walls	*1.6*	0	N/A	**N/A**
Floors	*0.18*	0.12	Flr - Ground (0.12)	OK
Roofs	*0.16*	0.09	Rf - Ins Joist (0.09)	OK
Windows, doors, and roof windows	*1.6*	1.28	Front (1.3)	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^2K]**
Exposed wall: Wl - Brick	41.233	0.18
Exposed wall: Wl - Block Course	1.152	0.2
Exposed wall: Wl - Clad	54.371	0.22
Party wall: Party Wall	14.139	0 **(!)**
Ground floor: Flr - Ground	4.07	0.12
Exposed roof: Rf - Ins Joist	86.919	0.09 **(!)**

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
Front, Door (1)	2.148	East	0.7	1.2
Front, Windows (1)	1.362	East	1.0	1.3
Front, Windows (2)	1.964	East	1.0	1.3
L Side, Windows (3)	4.076	South	1.0	1.3
Rear, Windows (4)	1.204	West	1.0	1.3

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)	Government-approved scheme	0.277	Not Provided
External wall	E4: Jamb	Government-approved scheme	0.025 **(!)**	Not Provided
External wall	E3: Sill	Government-approved scheme	0.02 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Government-approved scheme	0.063	Not Provided
External wall	E6: Intermediate floor within a dwelling	Government-approved scheme	0.063	Not Provided
External wall	E7: Party floor between dwellings (in blocks of flats)	Government-approved scheme	0.034 **(!)**	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.066	Not Provided
External wall	E16: Corner (normal)	Government-approved scheme	0.035 **(!)**	Not Provided
External wall	E18: Party wall between dwellings	Government-approved scheme	0.027 **(!)**	Not Provided
Party wall	P1: Ground floor	Government-approved scheme	0.038 **(!)**	Not Provided

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	4 m^3/hm^2, Design value	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Room heaters - Electricity	
Efficiency	100%
Emitter type	Radiators
Flow temperature	
System type	RoomElectric
Manufacturer	
Model	
Commissioning	
Main heating system 2: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	100%
Emitter type	Radiators
Flow temperature	
System type	HeatPumpsWet
Manufacturer	
Model	
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: N/A	
Capacity	172 litres
Declared heat loss	1.23 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: Programmer and room thermostats	
Function	
Ecodesign class	
Manufacturer	
Model	

Main heating 2 - type: No time or thermostatic control of room temperature		
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	101.25 lm/W	**OK**
External lights control	N/A	

8 Mechanical ventilation		
System type: Decentralised mechanical extract		
Maximum permitted specific fan power	*0.7 W/(l/s)*	
Specific fan power	0.01 W/(l/s)	**OK**
Minimum permitted heat recovery efficiency	*N/A*	
Heat recovery efficiency	1%	**N/A**
Manufacturer/Model	0	
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	0.81 kWp
Orientation	East
Pitch	45°
Overshading	None or very little
Manufacturer	Not Provided
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: KAZN000009
Name: Connor Campbell	Date: 12 Feb 2025

b. Client Declaration

N/A