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: Mon 10 Feb 2025 11:17:04

Project Information			
Assessed By	Connor Campbell	Building Type	Bungalow, Detached
OCDEA Registration	KAZN000009	Assessment Date	2025-02-10

Dwelling Details			
Assessment Type	As designed	Total Floor Area	77 m^2
Site Reference	38	Plot Reference	038 - B80104 TAC D BR 7.1
Address	B80104 TAC D BR 7.1, ..., XX1X 1XX		

Client Details	
Name	Bloor Homes South West
Company	Bloor Homes South West
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	*9.63 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	3.73 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*51.66 kWh_{PE}/m^2*	
Dwelling primary energy	39.07 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*41.41 kWh/m^2*	
Dwelling fabric energy efficiency	37.64 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*	0.24	Wl - Brick (0.24)	OK
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	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	70.991	0.24
Ground floor: Flr - Ground	76.563	0.12
Exposed roof: Rf - Ins Joist	76.563	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	North East	0.7	1.2
Front, Windows (1)	3.234	North East	1.0	1.3
L Side, Windows (2)	1.192	South East	1.0	1.3
Rear, Windows (3)	1.783	South West	1.0	1.3
Rear, Windows (4)	4.274	South 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	0.044	Not Provided
External wall	E4: Jamb	Government-approved scheme	0.01 **(!)**	Not Provided
External wall	E3: Sill	Government-approved scheme	0.009 **(!)**	Not Provided

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E5: Ground floor (normal)	Government-approved scheme	0.0546	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.04	Not Provided
External wall	E16: Corner (normal)	Government-approved scheme	0.029 **(!)**	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: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	531.87179586885873%
Emitter type	Radiators
Flow temperature	45°C
System type	HeatPumpsWet
Manufacturer	
Model	
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	1.18 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, room thermostat 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	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	Vent Axia Ltd Lo-Carbon NBR dMEV C 100	
Commissioning		

9 Local generation
N/A

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: 10 Feb 2025

b. Client Declaration

N/A