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 24 Feb 2025 12:14:16

Project Information			
Assessed By	Joanna Povey	Building Type	House, End-terrace
OCDEA Registration	KAZN000004	Assessment Date	2025-02-24

Dwelling Details			
Assessment Type	As designed	Total Floor Area	80 m^2
Site Reference	017 Chester	Plot Reference	017 Chester
Address	18, Shipley Close, Higham Ferrers, Rushden, NN10 8FU		

Client Details	
Name	Not Given
Company	Not Given
Address	Not Provided, Not Provided, AL9 5HZ

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	*11.61 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	3.54 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*60.80 kWh_{PE}/m^2*	
Dwelling primary energy	37.25 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*36.80 kWh/m^2*	
Dwelling fabric energy efficiency	32.85 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*	0.18	Brick (0.18)	OK
Party walls	*0.2*	0	Party Wall (0)	**N/A**
Curtain walls	*1.6*	0	N/A	**N/A**
Floors	*0.18*	0.11	Flr - Ground (0.11)	OK
Roofs	*0.16*	0.1	Rf - Ins Joist (0.1)	OK
Windows, doors, and roof windows	*1.6*	1.06	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: Brick	79.267	0.18
Party wall: Party Wall	41.34	0 **(!)**
Ground floor: Flr - Ground	39.981	0.11
Exposed roof: Rf - Ins Joist	39.981	0.1 **(!)**

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)	2.146	East	0.7	1.2
Rear, Door (2)	2.146	West		0 **(!)**
Front, Windows (1)	4.761	East	1.0	1.3
Rear, Windows (2)	3.524	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)	Calculated by person with suitable expertise	0.067	Not Provided
External wall	E4: Jamb	Calculated by person with suitable expertise	0.023 **(!)**	Not Provided

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E3: Sill	Calculated by person with suitable expertise	0.019 **(!)**	Not Provided
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.057	Not Provided
External wall	E6: Intermediate floor within a dwelling	Calculated by person with suitable expertise	0.001 **(!)**	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Calculated by person with suitable expertise	0.05	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.037 **(!)**	Not Provided
External wall	E18: Party wall between dwellings	Calculated by person with suitable expertise	0.031 **(!)**	Not Provided
Party wall	P1: Ground floor	Calculated by person with suitable expertise	0.059	Not Provided
Party wall	P3: Intermediate floor between dwellings (in blocks of flats)	SAP table default	0 **(!)**	Not Provided
Party wall	P4: Roof (insulation at ceiling level)	Calculated by person with suitable expertise	0.033 **(!)**	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: Boiler with radiators or underfloor heating - Electricity	
Efficiency	282.33362784627087%
Emitter type	Radiators
Flow temperature	45°C
System type	HeatPumpsWet
Manufacturer	Daikin Altherma
Model	EDLA04EV3
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	1.39 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	N/A	**N/A**
Manufacturer/Model	0	
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: Name: Joanna Povey	Assessor ID: KAZN000004 Date: 24 Feb 2025
b. Client Declaration	
N/A	