

Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed by Kaizen SAP 10.2 SAP 10 program, 10.2.03

Date: Wed 02 Jul 2025 13:05:25

Project Information			
Assessed By	Connor Campbell	Building Type	House, Detached
OCDEA Registration	KAZN000009	Assessment Date	2025-06-06

Dwelling Details			
Assessment Type	As designed	Total Floor Area	208 m ²
Site Reference	022	Plot Reference	Blenheim
Address	Address Line 1,, TN11 0RF		

Client Details	
Name	Dandara South East
Company	Dandara South East
Address	Courier House, 80-84 Calverley Road, Runbridge Wells, KENT, TN1 2UN

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	8.39 kgCO ₂ /m ²		
Dwelling carbon dioxide emission rate	3.12 kgCO ₂ /m ²	OK	
1b Target primary energy rate and dwelling primary energy			
Target primary energy	44.35 kWh _{PE} /m ²		
Dwelling primary energy	32.49 kWh _{PE} /m ²	OK	
1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	40.92 kWh/m ²		
Dwelling fabric energy efficiency	39.68 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	0.24	WI - 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	0.1	Rf - Joist Bay (0.19)	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 ² K]
Exposed wall: WI - Brick	157.022	0.24
Exposed wall: WI - Clad	14.917	0.23
Exposed wall: WI - Garage	14.092	0.24
Ground floor: Flr - Ground	111.607	0.12
Exposed roof: Rf - Ins Joist	96.729	0.09 (!)
Exposed roof: Rf - Ins Rafter	13.238	0.16
Exposed roof: Rf - Joist Bay	1.307	0.19

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]
Front, Door (1)	2.108	South	0.7	1 (!)
Front, Windows (1)	10.125	South	1.0	1.3
L Side, Windows (2)	1.992	West	1.0	1.3
R Side, Windows (3)	0.788	East	1.0	1.3
Rear, Windows (4)	7.068	North	1.0	1.3
Front, Windows (5)	2.172	South	1.0	1.3
Rear, Windows (6)	9.408	North	1.0	1.3
Rear, RoofLights (1)	1.617	North	0.7	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	0.057	Not Provided
External wall	E3: Sill	Calculated by person with suitable expertise	0.018 (!)	Not Provided
External wall	E4: Jamb	Calculated by person with suitable expertise	0.013 (!)	Not Provided
External wall	E5: Ground floor (normal)	Calculated by person with suitable expertise	0.072	Not Provided
External wall	E6: Intermediate floor within a dwelling	Calculated by person with suitable expertise	0.003 (!)	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Calculated by person with suitable expertise	0.044	Not Provided
External wall	E11: Eaves (insulation at rafter level)	Calculated by person with suitable expertise	0.01 (!)	Not Provided
External wall	E12: Gable (insulation at ceiling level)	Calculated by person with suitable expertise	0.033 (!)	Not Provided
External wall	E13: Gable (insulation at rafter level)	Calculated by person with suitable expertise	0.033 (!)	Not Provided
External wall	E16: Corner (normal)	Calculated by person with suitable expertise	0.041	Not Provided
External wall	E17: Corner (inverted - internal area greater than external area)	Calculated by person with suitable expertise	-0.094	Not Provided
External wall	E24: Eaves (insulation at ceiling level - inverted)	SAP table default	0.15	Not Provided
Roof	R1: Head of roof window	Calculated by person with suitable expertise	0.058	Not Provided
Roof	R2: Sill of roof window	Calculated by person with suitable expertise	0.049	Not Provided
Roof	R3: Jamb of roof window	Calculated by person with suitable expertise	0.058	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	
Emitter type	Radiators
Flow temperature	45°C
System type	HeatPumpsWet
Manufacturer	Panasonic
Model	WH-MDC07J3E5
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: Cylinder	
Capacity	300 litres
Declared heat loss	2.26 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	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:	Assessor ID:	
Name:	Date:	
b. Client Declaration		
N/A		