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 19 Feb 2025 10:31:15

Project Information			
Assessed By	Scott Binstead	Building Type	Flat, Detached
OCDEA Registration	KAZN000006	Assessment Date	2025-02-17

Dwelling Details			
Assessment Type	As designed	Total Floor Area	72 m^2
Site Reference	414	Plot Reference	Block L
Address	Address Line 1, ..., BN15 9EW		

Client Details	
Name	CALA Homes (South Home Counties) Limited
Company	CALA Homes (South Home Counties) Limited
Address	Dorking Business Park Station, DORKING, RH4 1HJ

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	*12.47 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	4.67 $kgCO_2/m^2$	OK
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*65.70 kWh_{PE}/m^2*	
Dwelling primary energy	50.75 kWh_{PE}/m^2	OK
1c Target fabric energy efficiency and dwelling fabric energy efficiency		
Target fabric energy efficiency	*33.24 kWh/m^2*	
Dwelling fabric energy efficiency	32.15 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*	0.21	Wl - Dormer (0.29)	OK
Party walls	*0.2*	N/A	N/A	**N/A**
Curtain walls	*1.6*	N/A	Corridor (0.22)	OK
Floors	*0.18*	N/A	N/A	**N/A**
Roofs	*0.16*	0.11	Flat over dormer (0.21)	OK
Windows, doors, and roof windows	*1.6*	1.31	Rear (1.4)	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 3.6N	40.567	0.21
Exposed wall: Corridor	17.429	0.22
Exposed wall: Wl - Dormer	1.05	0.29
Exposed roof: Rf - Ins Joist	58.651	0.09 **(!)**
Exposed roof: Rf - Ins Rafter	14.379	0.15
Exposed roof: Flat over dormer	3.018	0.21

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
Rear, Door (1)	1.919	East	0.7	1.2
Front, Windows (1)	5.1	West	1.0	1.3
Rear, Windows (2)	0.955	East	1.0	1.3
Rear, Windows (3)	3.3	East	1.0	1.4

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	0.224	Not Provided

Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E4: Jamb	Government-approved scheme	0.02 **(!)**	Not Provided
External wall	E3: Sill	Government-approved scheme	0.015 **(!)**	Not Provided
External wall	E7: Party floor between dwellings (in blocks of flats)	Government-approved scheme	0.043	Not Provided
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.05	Not Provided
External wall	E11: Eaves (insulation at rafter level)	Government-approved scheme	0.04	Not Provided
External wall	E12: Gable (insulation at ceiling level)	Government-approved scheme	0.039 **(!)**	Not Provided
External wall	E13: Gable (insulation at rafter level)	Government-approved scheme	0.04	Not Provided
External wall	E16: Corner (normal)	Government-approved scheme	0.043	Not Provided
External wall	E24: Eaves (insulation at ceiling level - inverted)	Government-approved scheme	0.15	Not Provided
Roof	R3: Jamb of roof window	Government-approved scheme	0.24	Not Provided
Roof	R6: Flat ceiling	SAP table default	-0.059	Not Provided
Roof	R7: Flat ceiling (inverted)	SAP table default	-0.046	Not Provided
Roof	R10: All other roof or room-in-roof junctions	Government-approved scheme	0.32	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	200%
Emitter type	Radiators
Flow temperature	
System type	RoomElectric
Manufacturer	
Model	
Commissioning	
Main heating system 2: Heat pump with radiators or underfloor heating - Electricity	
Efficiency	200%
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	192 litres
Declared heat loss	1.603 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: Not applicable		
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	Zehnder Group UK Ltd Unity CV2.1	
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	0.81 kWp
Orientation	South
Pitch	30°
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: Name: Scott Binstead	Assessor ID: KAZN000006 Date: 19 Feb 2025
b. Client Declaration	
N/A	