Building Regulations Wales Part L (BRWL) Compliance Report

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

Date: Wed 04 Dec 2024 03:06:41

Project Information			
Assessed By	Chris Nicholls	Building Type	House, Semi-detached
OCDEA Registration	KAZN000001	Assessment Date	2013-11-19

Dwelling Details			
Assessment Type	As built	Total Floor Area	89 m^2
Site Reference	WLS1e	Plot Reference	WLS-1e-SAP10 - Dwelling type 3 - Semi_EPC.xml
Address	--------, --------, CF23 9EA		

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	Mains gas	
Target carbon dioxide emission rate	*9.75 $kgCO_2/m^2$*	
Dwelling carbon dioxide emission rate	16.38 $kgCO_2/m^2$	**FAIL**
1b Target primary energy rate and dwelling primary energy		
Target primary energy	*50.60 kWh_{PE}/m^2*	
Dwelling primary energy	96.14 kWh_{PE}/m^2	**FAIL**
1c Minimum energy efficiency rating and dwelling energy efficiency rating		
Minimum energy efficiency rating	*81*	
Dwelling energy efficiency rating	81	**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	*0.18*	0.18	Walls (1) (0.18)	**OK**
Party walls	*0.2*	0.2	Party wall (0.2)	**OK**
Curtain walls	*1.4*	0.2	N/A	**N/A**
Floors	*0.15*	0.28	Floor (1) (0.28)	**FAIL**
Roofs	*0.13*	0.13	Roof (1) (0.13)	**OK**
Windows, doors, and roof windows	*1.4*	1.27	1 (1.5)	**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: Walls (1)	75.53	0.18
Party wall: Party wall	36	0.2
Ground floor: Floor (1)	44.4	0.28
Exposed roof: Roof (1)	44.4	0.13

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	**Area [m^2]**	**Orientation**	**Frame factor**	**U-Value [W/m^2K]**
1, Doors	1.89	East	N/A	1.5
2, Doors	1.89	East	N/A	1.5
3, Windows (2)	3.78	West	0.7	1.3
4, Windows (1)	0.945	East	0.7	1.2
5, Windows (1)	0.385	South	0.7	1.2
6, Windows (1)	3.08	East	0.7	1.2
7, Windows (1)	0.385	North	0.7	1.2
8, Windows (1)	0.42	South	0.7	1.2
9, Windows (1)	3.36	East	0.7	1.2
10, Windows (1)	0.42	North	0.7	1.2
11, Windows (1)	2.16	West	0.7	1.2
12, Windows (1)	0.81	West	0.7	1.2

Name	Area [m^2]	Orientation	Frame factor	U-Value [W/m^2K]
13, Windows (1)	0.45	West	0.7	1.2
14, Windows (1)	0.945	South	0.7	1.2

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	0.3	Imported
External wall	E3: Sill	Government-approved scheme	0.04	Imported
External wall	E4: Jamb	Government-approved scheme	0.05	Imported
External wall	E5: Ground floor (normal)	Government-approved scheme	0.16	Imported
External wall	E6: Intermediate floor within a dwelling	Government-approved scheme	0.07	Imported
External wall	E10: Eaves (insulation at ceiling level)	Government-approved scheme	0.06	Imported
External wall	E16: Corner (normal)	Government-approved scheme	0.09	Imported
External wall	E18: Party wall between dwellings	Government-approved scheme	0.06	Imported
Party wall	P1: Ground floor	Not government-approved scheme	0.16	Imported
Party wall	P2: Intermediate floor within a dwelling	SAP table default	0 **(!)**	Imported
Party wall	P4: Roof (insulation at ceiling level)	Not government-approved scheme	0.24	Imported

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, Measured value	OK
Air permeability test certificate reference		

4 Space heating	
Main heating system 1: Boiler with radiators or underfloor heating - Mains gas	
Efficiency	90.3%
Emitter type	Radiators
Flow temperature	55°C
System type	Gas1998OrLater
Manufacturer	
Model	
Commissioning	
Secondary heating system: N/A	
Fuel	N/A
Efficiency	N/A
Commissioning	

5 Hot water	
Cylinder/store - type: N/A	
Capacity	N/A
Declared heat loss	N/A
Primary pipework insulated	N/A
Manufacturer	
Model	
Commissioning	
Waste water heat recovery system 1 - type: N/A	
Efficiency	
Manufacturer	
Model	

6 Controls	
Main heating 1 - type: Programmer, TRVs, and bypass	
Function	
Ecodesign class	
Manufacturer	
Model	

Water heating - type: Cylinder thermostat		
Manufacturer		
Model		

7 Lighting		
Minimum permitted light source efficacy	*75 lm/W*	
Lowest light source efficacy	11.2 lm/W	**FAIL**
External lights control	N/A	

8 Mechanical ventilation		
System type: N/A		
Maximum permitted specific fan power	*N/A*	
Specific fan power	N/A	**N/A**
Minimum permitted heat recovery efficiency	*N/A*	
Heat recovery efficiency	1%	**N/A**
Manufacturer/Model		
Commissioning		

9 Local generation	
Technology type: **Photovoltaic system (1)**	
Peak power	1.2 kWp
Orientation	North
Pitch	Horizontal
Overshading	None or very little
Manufacturer	Not Provided
MCS certificate	

10 Heat networks
N/A

11 Supporting documentary evidence	
Documentary evidence identified in 11.1 and 11.2 is needed to confirm the data values used for any calculations undertaken, manufacturer declarations made, and tests performed as reflected in this "As built" BRWL Compliance Report are correct. 11.1 SAP Conventions, Appendix 1 (documentary evidence) schedules the minimum documentary evidence required. 11.2 Indicative photographic evidence of key stages during construction (guidance within Approved Document L, Volume 1 – Appendix B) that confirms the products identified in this BRWL Compliance Report are used in this dwelling, and workmanship is of sufficient quality to support the calculated values claimed in 2a to 2d.	

12 Declarations	
a. Assessor Declaration	
This declaration by the assessor is confirmation that the contents of this BRWL Compliance Report are a true and accurate reflection based upon the design and construction information submitted for this dwelling for the purpose of carrying out the assessment, and that the supporting documentary evidence (identified in 11.1 and 11.2) pursuant to Part L of the Building Regulations 2010 (as amended) has been reviewed in the course of preparing this BRWL Compliance Report.	
Signed: Name: Chris Nicholls	Assessor ID: KAZN000001 Date: 04 Dec 2024
b. Client Declaration	
This declaration by the client is confirmation that the dwelling has been constructed and completed according to the specifications set out in this BRWL Compliance Report, and that photographic evidence of key stages, as described in 11.2, has been provided to the Assessor for this dwelling.	
Signed: Name: Not Given	Organisation: Not Given Date: