

Building Compliance
Design & Testing

May 2024

Essential guide: New regulations U-value handbook

The latest updates to Part L
Building Regulations

ATSPACE

DELIVERING BEYOND COMPLIANCE

Part L Regulations: Setting New Standards for Improved Energy Performance in Buildings

Building Regulations Part L addresses the conservation of fuel and power in new and existing homes in England. With buildings contributing about 40% of UK greenhouse gases, improving energy performance is crucial to reducing emissions and energy costs.

In June 2022, Part L regulations underwent significant updates to support the government's net-zero target. The new rules emphasise a fabric-first approach and renewable technologies like heat pumps, aiming to reduce the carbon output of new homes by 31%. Standards for extensions and replacements in existing homes have also tightened.

To be exempt from the new requirements, projects following the 2013 version of Approved Document L2A must have started on-site by June 15, 2023. These changes precede the Future Homes Standard (FHS), which, from 2025, will require new homes to produce 75-80% fewer carbon emissions than properties built to the previous standard.

Review of interim Part L changes (England)

The updated Part L now consolidates into two documents: Approved Document L1 for new and existing domestic buildings (ADL1), and Approved Document L2 for new and existing non-domestic buildings (ADL2). These changes emphasise the importance of both fabric performance and low-carbon technologies in achieving energy-efficient homes.

Please refer to the table below for the new energy performance standards in England.

Part L 2021 England – Came into force from 15th June 2022									
Element	New Buildings					Existing Buildings			
	L1A (Dwellings)		L2A (Non-Dwelling)			L1B (Dwellings)		L2B (Non-Dwelling)	
	Limiting U-values ¹	Notional Dwelling ²	Limiting U-values ¹	Notional Building		Target U-values		Target U-values	
				Side-lit and Unlit Activities	Top-lit Activities	New	Retained (Improved)	New	Retained (Improved)
Floor	0.18	0.13	0.18	0.15	0.22	0.18	0.25	0.18	0.25
Wall	0.26	0.18	0.26	0.18	0.26	0.18	0.30 (E/IWI) 0.55 (C/W)	0.26	0.30 (E/IWI) 0.55 (C/W)
Party Wall	0.20	0.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Flat Roof	0.16	0.11	0.18	0.15	0.18	0.15	0.16	0.18	0.18
Pitched Roof (slope)	0.16	0.11	0.16	0.15	0.18	0.15	0.16	0.16	0.18
Pitched Roof (horizontal ceiling)	0.16	0.11	0.16	0.15	0.18	0.15	0.16	0.16	0.16

¹ Fabric performance should not be worse than the limiting U-values

² Notional Dwelling could be used as a best starting point



This table outlines indicative fabric target values anticipated after the introduction of the Future Homes Standard in 2025. The FHS, developed during consultations for Part L, aims to accelerate emissions reductions ahead of its implementation.

Future Homes Standard – Indicative			
Element	2013 Part L Standards	Current 2021 Part L Standards	Indicative FHS Specification (2025)
Floor U-value (W/m ² K)	0.13	0.13	0.11
External Wall U-value (W/m ² K)	0.18	0.18	0.15
Roof U-value (W/m ² K)	0.13	0.11	0.11
Window U-value (W/m ² K)	1.4	1.2	0.80
Door U-value (W/m ² K)	1.00–1.20	1.00	1.00
Air Permeability at 50 Pa	5.0 m ³ /(h.m ²)	5.0 m ³ /(h.m ²)	5.0 m ³ /(h.m ²)
Heating Appliance	Gas boiler	Gas boiler	Low-carbon heating (e.g. heat pump)
Heat Emitter Type	Regular radiators	Low temperature heating	Low temperature heating
Ventilation System Type	Natural (with extract fans)	Natural (with extract fans)	Natural (with extract fans)
PV	No	40% floor area	None
Wastewater Heat Recovery	No	Yes	No

Guidance on the previous version of Part L of the Building Regulations (ADL 2013) is provided at the bottom of this page for reference. This guidance is applicable to individual units where plans were submitted by June 14, 2022, and work commenced by June 14, 2023. Please consult with building control for additional guidance.

Part L 2013 England (for reference)								
Element	New Buildings				Existing Buildings			
	L1A (Dwellings)		L2A (Non-Dwelling)		L1B (Dwellings)		L2B (Non-Dwelling)	
	Limiting U-values ¹	Notional Dwelling ²	Limiting U-values ¹	Notional Building	Target U-values		Target U-values	
				New	Retained (Improved)	New	Retained (Improved)	
Floor	0.25	0.13	0.25	0.22	0.22	0.25	0.22	0.25
Wall	0.30	0.18	0.35	0.26	0.28	0.30 (E/IWI)	0.28	0.30 (E/IWI)
Party Wall	0.20	0.00	n/a	n/a	n/a	n/a	n/a	n/a
Flat Roof	0.20	0.13	0.13	0.18	0.18	0.18	0.18	0.18
Pitched Roof (slope)	0.20	0.13	0.13	0.18	0.18	0.18	0.18	0.18
Pitched Roof (horizontal ceiling)	0.20	0.13	0.13	0.18	0.16	0.16	0.16	0.16

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Review of interim Part L changes (Wales)

In Wales, Part L amendments now require newly constructed buildings to follow the SAP 10 methodology. They must meet a minimum energy efficiency standard, aiming for an Energy Performance Certificate (EPC) rating of B or 81. Additionally, new-build homes must undergo mandatory air-tightness testing. These regulations apply to properties where construction begins on or after November 23rd, 2023. Part O has also been introduced in Wales to address overheating risks independently from Part L and SAP.

Please see below Part L Wales Standards (2022).

Part L Wales Standards (2022)								
Element		New Buildings				Existing Buildings		
		Limiting U-values ¹	Notional Dwelling ²	Limiting U-values ¹	Notional Building	Target U-values	Target U-values	
		L1A (Dwellings)		L2A (Non-Dwelling)		L1B (Dwellings)	L2B (Non-Dwelling)	
						"Domestic"	Other	
Floor		0.15	0.11	0.22	0.22	0.15	0.18	0.22
Walls	Wall – Dwelling Houses	0.18	0.13	0.26	0.26	0.18	0.21	0.26
	Wall – Flats	0.21	0.18	0.26	n/a	0.21	n/a	n/a
Party Wall		0.20	0.00	n/a	0.18	0.20	0.15	0.16
Roofs	Flat Roof / Pitched Roof (slope)	0.13	0.11	0.20	0.18	0.13	0.15	0.18
	Pitched Roof (horizontal ceiling)	0.13	0.11	0.20	0.18	0.13	0.15	0.15

¹ Fabric performance should not be worse than the limiting U-values

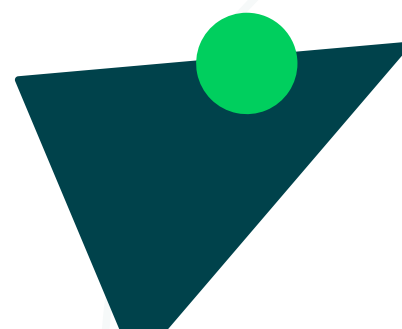
² Notional Dwelling could be used as a best starting point

For reference, this table outlines Part L Wales Standards (2014).

Part L Wales Standards (2014)						
Element	New Buildings				Target U-values	
	Limiting U-values ¹	Notional Dwelling ²	Limiting U-values ¹	Notional Building	Target U-values	
	L1A (Dwellings)		L1B (Dwellings)	L2A (Non-Dwelling)	L2B (Non-Dwelling)	
					"Domestic"	Other
Floor	0.15	0.11	0.22	0.22	0.18	0.22
Wall	0.21	0.18	0.21	0.26	0.21	0.26
Party Wall	0.20	0.00	0.20	n/a	n/a	n/a
Flat Roof	0.15	0.11	0.15	0.18	0.15	0.18
Pitched Roof (slope)	0.15	0.11	0.15	0.18	0.15	0.18
Pitched Roof (horizontal ceiling)	0.15	0.11	0.15	0.18	0.15	0.15
Swimming Pool Basin	n/a	n/a	n/a	n/a	n/a	n/a

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Review of interim Section 6 changes (Scotland)

In Scotland, revised Section 6 energy standards apply to new domestic and non-domestic building applications received after February 1st, 2023. These changes aim to reduce carbon emissions by 32% compared to the 2015 standards. A new Delivered Energy compliance metric is introduced alongside existing carbon emissions standards.

All new homes must undergo mandatory airtightness testing, following the CIBSE TM23 standard. Standard 3.28 now addresses overheating risk, aligning with amendments in England and Wales. Additionally, Section 6 updates include the adoption of the SAP 10 methodology.

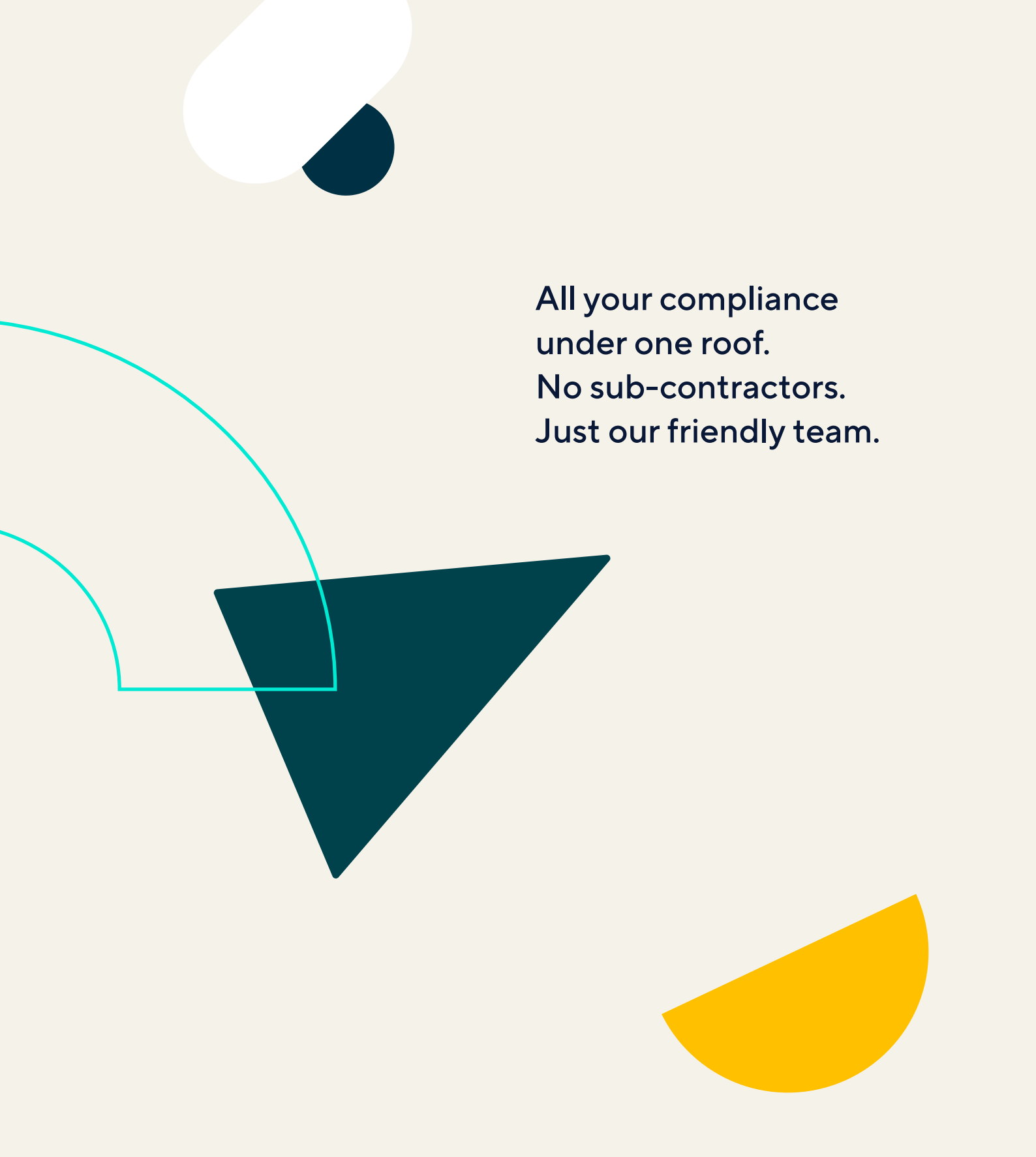
Please refer to the amended Section 6 energy standards for Scotland below.

Section 6 (2023)				
Element	Domestic		Non-Domestic	
	Notional Dwelling ¹	Alteration, Extension or Conversion and Back-Stops (area weighted averages)	Notional Dwelling ¹	Alteration, Extension or Conversion and Back-Stops (area weighted averages)
	New Build	Existing Dwelling	New Build	Existing Dwelling
Floor	0.12	0.15	0.13	0.18
Wall	0.15	0.17	0.15	0.21
Roofs	0.09	0.12	0.11	0.16

The table outlines the 2015 section 6 energy standards.

Section 6 (2015)			
Element	Notional Dwelling ¹	New / Upgraded Elements	Walls > 0.70, Roof > 0.25
	New Build	Existing Dwelling	
Floor	0.15	0.18	0.15
Wall	0.17	0.22	0.17
Roofs	0.11	0.18	0.13
Pitched Roof (slope)	0.11	0.18	0.13
Pitched Roof (horizontal ceiling)	0.11	0.15	0.11

¹ Notional Dwelling could be used as a best starting point



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