

PART L 2021 (JUNE 2022)

CONTENTS (GUIDES)

DWELLINGS (NEW BUILD)

FLATS (NEW BUILD)

DWELLINGS (CHANGE OF USE)

EXTENSIONS (TO DWELLINGS)

LOFT CONVERSIONS

THERM ENERGY SERVICES

SAP + EPC (DWELLINGS)

SBEM + EPC (OTHER TYPES OF BUILDINGS)

EXTENSIONS (DWELLINGS)

PLANNING REPORTS (SUSTAINABILITY ETC)

WATER USE CALCULATIONS

OVER-HEATING ASSESSMENTS (PART O)

AIR TESTING

SOUND TESTING

EXTRACT FAN TESTING

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PART L 2021 (JUNE 2022) : NEW DWELLINGS (Houses + Flats)

SPECIFICATION OPTION 1 : GAS + SOLAR PV

External Walls	U=0.18W/m ² K	Example : 300mm wide cavity wall with 90mm Celotex ThermaClass 21 cavity insulation
Party Walls	U=0.00W/m ² K	Example : 275mm cavity wall with 75mm acoustic mineral wool in cavity
Floors	U=0.13W/m ² K	Example : 140mm PIR insulation (concrete floor)
Roofs	U=0.11W/m ² K	Example : 400mm mineral wool insulation quilt
Windows/Doors	U=1.30W/m ² K	This can vary 1.20-1.40 (depending upon amount of glazing)
Air Permeability	5m ³ /h/m ²	
Heating	Gas Boiler	92% efficiency as defined in ErP (zoned heating controls + delayed start thermostats)
Ventilation	Natural	Background + intermittent extract fans (Part F)
Lighting	Low Energy	LED or CFL (or similar), minimum luminous efficacy of 75 light source lumens/circuit-watt
WWHR	May be required	Wastewater heat recovery (showers)
Solar PV	Required	Houses = Footprint (m ²) x 40% / 6.5 Flats = Floor Area of Flat (m ²) x 40% / (6.5 x No of Stories in Block)

SPECIFICATION OPTION 2 : AIR SOURCE HEAT PUMP (ASHP)

External Walls	U=0.18W/m ² K	Example : 300mm wide cavity wall with 90mm Celotex ThermaClass 21 cavity insulation
Party Walls	U=0.00W/m ² K	Example : 275mm cavity wall with 75mm acoustic mineral wool in cavity
Floors	U=0.13W/m ² K	Example : 140mm PIR insulation (concrete floor)
Roofs	U=0.11W/m ² K	Example : 400mm mineral wool insulation quilt
Windows/Doors	U=1.30W/m ² K	This can vary 1.20-1.40 (depending upon amount of glazing)
Air Permeability	5m ³ /h/m ²	
Heating	ASHP (Electric)	PCDB (Products Characteristic Database) listed, or MCS installer (or both)
Ventilation	Natural	Background + intermittent extract fans (Part F)
Lighting	Low Energy	LED or CFL (or similar), minimum luminous efficacy of 75 light source lumens/circuit-watt
WWHR	Not Required	
Solar PV	Not Required	

PART L 2021 (JUNE 2022) : NEW FLATS

SPECIFICATION

External Walls	U=0.18W/m ² K	Example : 300mm wide cavity wall with 90mm Celotex ThermaClass 21 cavity insulation
Party Walls	U=0.00W/m ² K	Example : 275mm cavity wall with 75mm acoustic mineral wool in cavity
Floors	U=0.13W/m ² K	Example : 140mm PIR insulation (concrete floor)
Roofs (Lofts)	U=0.11W/m ² K	Example : 400mm mineral wool insulation quilt
Roofs (Skeilings)	U=0.15W/m ² K	Example : 100mm PIR insulation between rafters + 67.5mm insulated plasterboard (PIR)
Roofs (Flat)	U=0.15W/m ² K	Example : 140mm PIR insulation over roof deck (warm roof)
Windows/Doors	U=1.30W/m ² K	This can vary 1.20-1.40 (depending upon amount of glazing)
Air Permeability	5m ³ /h/m ²	
Space Heating	As preferred	Any suitable and compliant heating system possible (ie gas or electric etc) Note : If higher energy ratings are required, gas combi boilers are recommended
Water Heating	Heat Pump	Hot water heat pump (eg Dimplex Edel, Vaillant AroStor etc)
Ventilation	As required	Background + intermittent extract fans (if meets Part F), otherwise MEV, dMEV or MVHR
Lighting	Low Energy	LED or CFL (or similar), minimum luminous efficacy of 75 light source lumens/circuit-watt
Solar PV		May not be required, depending upon U-values, space heating and ventilation etc, but worst case scenario is a small installation feeding to the landlord supply

PART L 2021 (JUNE 2022) : DWELINGS (CHANGE OF USE)

SPECIFICATION

External Walls (Existing-Lined)	U=0.30W/m ² K	Example 1 : Solid brick wall + 72.5mm insulated plasterboard (PIR insulation) Example 2 : Cavity brick wall + 67.5mm insulated plasterboard (PIR insulation)
External Walls (Existing-CWI)	U=0.55W/m ² K	Where cavity walls can be injected with insulation (otherwise line internally as above)
External Walls (New)	U=0.18W/m ² K	Example : 300mm wide cavity wall with 90mm Celotex ThermaClass 21 cavity insulation + 100mm aerated block inner leaf
Ground Floors (Existing)	U=0.25W/m ² K	Example : 70mm PIR insulation (concrete floor). Insulation may not be needed in larger buildings or where adding insulation is not practical.
Ground Floors (New)	U=0.18W/m ² K	Example : 100mm PIR insulation (concrete floor)
Roofs (Lofts)	U=0.15W/m ² K	Example : 300mm mineral wool insulation quilt (150mm + 150mm cross-laid)
Roofs (Skeilings)	U=0.15W/m ² K	Example : 100mm PIR insulation between rafters + 67.5mm insulated plasterboard (PIR)
Roofs (Flat)	U=0.15W/m ² K	Example : 140mm PIR insulation over roof deck (warm roof)
Windows/Doors	U=1.40W/m ² K	Alternatively Energy Rating Band B
Heating	As preferred	Any suitable and compliant heating system possible (ie gas or electric etc)
Ventilation	Natural	Background + intermittent extract fans (Part F)
Lighting	Low Energy	LED or CFL (or similar), minimum luminous efficacy of 75 light source lumens/circuit-watt
Solar PV	Not Required	It is possible, however, that adding solar pv may allow the above to be relaxed

NOTES

External Walls (Existing)	U=0.70W/m ² K	If the existing external wall has some existing insulation (typically buildings constructed after 1981) it may not be necessary to add any insulation.
Ground Floors	U=0.70W/m ² K	The existing ground floor may not need to be insulated if it meets the threshold U-value of 0.70W/m ² K, or adding insulation is not possible.
Roofs	U=0.35W/m ² K	Where an existing roof is already insulated to a reasonable standard, such as 150mm mineral wool quilt in lofts, or 75mm PIR in rafters, adding more insulation may not be necessary.

PART L (2021 (JUNE 2022) : DWELINGS (EXTENSIONS TO DWELLINGS)

SPECIFICATION

External Walls	U=0.18W/m ² K	Example 1 : 300mm wide cavity wall with 90mm Celotex ThermaClass 21 cavity insulation in 100mm wide cavity (100mm Celcon or equal block inner leaf) Example 2 : 350mm cavity wall with 150mm Dritherm 32 insulation (100mm Celcon block)
Ground Floors	U=0.18W/m ² K	Example : 100mm PIR insulation (concrete floor), eg Celotex
Roofs (Lofts)	U=0.15W/m ² K	Example : 300mm mineral wool insulation quilt (150mm + 150mm cross-laid)
Roofs (Skeilings)	U=0.15W/m ² K	Example : 100mm PIR insulation between rafters + 67.5mm insulated plasterboard (PIR)
Roofs (Flat)	U=0.15W/m ² K	Example : 140mm PIR insulation over roof deck (warm roof), eg Celotex
Windows/Doors	U=1.40W/m ² K	Note : Total area of windows, external doors and rooflights not to exceed 25% of floor area of extension, plus any openings that no longer exist (see notes below)
Heating	As preferred	Any suitable and compliant heating system possible (eg extension of main system)
Ventilation	Natural	Background + intermittent extract fans (Part F)
Lighting	Low Energy	LED or CFL (or similar), minimum luminous efficacy of 75 light source lumens/circuit-watt
Solar PV	Not Required	

NOTES

Windows/Doors (and rooflights)	> 25% of Floor Area	Where the area of glazing exceeds 25% of floor area of the new extension (plus any openings that are lost), SAP may be used to demonstrate compliance, allowing more design freedom.
Walls/Floors/ Roofs	> U-value Above	Where U-values are higher (worse) than stated above, SAP may be used to demonstrate compliance, allowing more design freedom and flexibility.
Conservatories	Non-Separated	Where a conservatory is not separated from the dwelling, or where the main heating system is extended into the conservatory, it should be treated as an extension as above.
Garden Rooms & Orangeries	Separated or Non-Separated	This type should be treated as an extension (above). It is not considered a conservatory unless at least 75% of the roof and at least 50% of the external wall are glazed.

SAP PROCEDURE (WHERE REQUIRED)

Please contact Therm Energy Ltd for a no obligation quote (enquiries@thermenergy.co.uk, 01903 884357)

PART L 2021 (JUNE 2022) : DWELINGS (LOFT CONVERSIONS)

SPECIFICATION

External Walls	U=0.18W/m ² K	Example 1 : 300mm wide cavity wall with 90mm Celotex ThermaClass 21 cavity insulation Example 2 : 350mm cavity wall with 150mm Dritherm 32 insulation (100mm Celcon block) Example 3 : Dormer with 100mm PIR between timber studs + 50mm PIR insulation to inside face of frame (or 62.5mm insulated plasterboard with PIR insulation)
Roofs (Lofts)	U=0.15W/m ² K	Example : 300mm mineral wool insulation quilt (150mm + 150mm cross-laid)
Roofs (Skeilings)	U=0.16W/m ² K	<u>Rafters at 600mm Centres</u> (see notes below) Example 1 : 100mm PIR insulation between rafters + 50mm PIR insulation (under rafters) Example 2 : 50mm PIR insulation between rafters + 85mm PIR insulation (under rafters) <u>Rafters at 400mm Centres</u> (see notes below) Example 1 : 100mm PIR insulation between rafters + 55mm PIR insulation (under rafters) Example 2 : 50mm PIR insulation between rafters + 90mm PIR insulation (under rafters) Note : Reduced insulation likely to be possible if SAP calculations are carried out
Roofs (Flat)	U=0.15W/m ² K	<u>Warm Roof</u> (unventilated) Example : 140mm PIR insulation over roof deck (warm roof), eg Celotex <u>Cold Roof</u> (ventilated) Insulation as Roofs (Skeilings) above
Windows/Doors	U=1.40W/m ² K	Note : Total area of windows, external doors and rooflights not to exceed 25% of floor area of loft conversion, plus any openings that no longer exist (see notes below)
Heating	As preferred	Any suitable and compliant heating system possible (eg extension of main system)
Ventilation	Natural	Background + intermittent extract fans (Part F)
Lighting	Low Energy	LED or CFL (or similar), minimum luminous efficacy of 75 light source lumens/circuit-watt
Solar PV	Not Required	

NOTES

Windows/Doors (and rooflights)	> 25% of Floor Area	Where the area of glazing exceeds 25% of floor area of the loft conversion (plus any openings that are lost), SAP may be used to demonstrate compliance, allowing more design freedom.
Walls/Roofs	> U-value Above	Where U-values are higher (worse) than stated above, SAP may be used to demonstrate compliance, allowing more design freedom and flexibility.

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