

TABLE 1 - Minimum energy related design performance requirements (for land led developments) - Based on LETI 'Climate Emergency Design Guide'

This table is to be read in conjunction with <https://www.leti.london/cedg>, the main document of the Model ERs/Design Brief Clauses and Table 2 in the Appendices.

| Minimum performance requirements | Development type | | Design stage aims, additional considerations and comments |
|--------------------------------------------|-------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| | Small scale/ low rise housing | Medium & large housing (4 or more storeys) | |
| Heating and hot water generation | Fossil fuel free | Fossil fuel free | (1) Maximise the use of renewable heat generation (2) Check adequacy of local electrical supply capacity |
| Space heating demand | 15 kWh/m ² .yr | 15 kWh/m ² .yr | (1) Maximum 10 W/m ² peak heat loss (including ventilation) (2) Maximum dead leg of 1 litre for hot water pipework |
| Fabric U-values (W/m².K) | | | |
| Walls | 0.13 - 0.15 | 0.13 - 0.15 | |
| Floor | 0.08 - 0.10 | 0.08 - 0.10 | |
| Roof | 0.10 - 0.12 | 0.10 - 0.12 | |
| Exposed ceilings/ floors | 0.13 - 0.18 | 0.13 - 0.18 | |
| Windows | 0.80 (triple glazing) | 1.00 (triple glazing) | |
| Doors | 1.00 | 1.00 | |

| Minimum performance requirements | Development type | | Design stage aims, additional considerations and comments |
|--------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| | Small scale/ low rise housing | Medium & large housing (4 or more storeys) | |
| Efficiency measures | | | |
| Air tightness | <1 m ³ /hr.m ² @50pa | <1 m ³ /hr.m ² @50pa | |
| Thermal bridging | 0.04 (y-value) | 0.04 (y-value) | |
| G-value of glass | 0.6 - 0.5 | 0.6 - 0.5 | |
| MVHR (required) | 90% (efficiency) ≤2m duct length (from unit to external wall) | 90% (efficiency) ≤2m duct length (from unit to external wall) | |
| Window areas guide (% of wall area) | | | |
| North | 10-15% | 10-20% | (1) Balance daylight and overheating risk assessment/ modelling |
| East | 10-15% | 10-15% | (2) Include external shading - to suit Overheating risk assessment/ modelling |
| South | 20-25% | 20-25% | (3) Include openable windows and cross ventilation - refer also to Overheating risk assessment/ modelling |
| West | 10-15% | 10-15% | |
| Form factor | 1.7 - 2.5 | <0.8 - 1.5 | (1) Form factor is the ratio of external surface area (i.e. the parts of the building exposed to outdoor conditions) to the internal floor area |

| Minimum performance requirements | Development type | | Design stage aims, additional considerations and comments |
|-------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Small scale/ low rise housing | Medium & large housing (4 or more storeys) | |
| Renewables | Maximise renewables so that 100% of annual energy requirement is generated on-site | Maximise renewables so that 70% of the roof favourable for solar is covered | (1) On-site renewable electrical generation is to bring all residual regulated emissions to zero (2) Provision of solar PV to all remaining available and suitable roof spaces to be considered by a design stage option appraisal, feasibility and cost benefit study (3) DNO approvals required |
| Recommended (optional LETI requirements) | | | |
| Energy Use Intensity (EUI) | 35 kWh/m ² .yr | | (1) Energy Use Intensity in GIA, excluding renewable energy contribution |
| Embodied | Reduce embodied carbon by 40% or to <500 kgCO ₂ /m ² (area in GIA) | | (1) Focus on reducing embodied carbon for the largest uses |
| Demand response | Refer to LETI guidance https://www.leti.london/cedg | | |
| Data disclosure and metering | Refer to LETI guidance https://www.leti.london/cedg | | (1) Data and performance to be detailed in end of project BPE report |