Building Regulations Update

Approved Documents L, O and S
Summary of Changes and New Requirements

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Building Regulations Updates

In December 2021 the Government published the updated Building Regulations for England, following a long consultation process. This included the folowing documents.

- Approved Document L – updated energy performance requirements
- Approved Document O – new document addressing overheating risk to replace basic assessment within AD L
- Approved Document S – new document setting requirements for electric vehicle charging points.

This summary constitutes a brief overview of the changes and new requirements to be adopted, please contact AES to discuss further.

Implementation Timetable and Transitional Arrangements

To ensure that as many homes as possible are built to the updated standards, the transitional arrangements will now be applied to individual homes rather than whole developments, with a period of one year from the introduction of new regulations being imposed.

Based on the implementation timetable, developers must therefore submit building notice/initial notice by June 2022 and commence work on an individual building by June 2023 for these transitional arrangements to apply. Dwellings registered or commenced after these dates will be required to comply with the updated standards.

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Approved Document L

Compliance Metrics

CO_2 Emissions

As expected, Part L 2021 will adopt a 31% uplift in CO_2 emissions standards compared with Part L 2013. This is considered an appropriate interim step prior to the introduction of the Future Homes Standard in 2025.

Primary Energy

The new primary energy target will be adopted, taking into account efficiency of a dwelling's heating systems as well as upstream energy uses e.g. power station efficiencies, fuel transportation and conversion. Achieving this standard will therefore depend on the fuel source utilised for space and water heating together with on-site energy generation.

Fabric Energy Efficiency

The Fabric Energy Efficiency metric will be improved, with the Regulations adopting the 'full FEES' target. This is likely to require improvements across numerous areas of specifciation compared with Part L 2013.

Minimum standards for fabric and fixed building services

Updated minimum u-values for thermal elements will be adopted constituting a relatively minor improvement on current minimum standards. The worst performing building services products will be no longer be able to be specified, with updated standards set for boilers, heat pumps, cooling systems and lighting.

Airtightness Testing

All dwellings will need to be pressure tested for airtightness, a sample approach is no longer acceptable.

Performance Gap & Compliance

In order to address the 'performance gap', a range of measures to ensure accuracy of as-built assessments will be introduced. The proposals are detailed in Approved Document L Appendix B: 'Reporting evidence of compliance', and include:

- The standardised Buildings Regulations England Part L (BREL) report and **photographic evidence of compliance** should be provided to the building control body **and to the building owner** to demonstrate compliance with the energy efficiency requirements.
- These reports can then be used by the building control body to assist checking that what has been designed is actually built.
- **The as-built BREL report should be signed by the energy assessor** to confirm that the as-built calculations are accurate and that the supporting evidence and photographs have been reviewed in the course of preparing the as-built BREL report.
- **The as-built BREL report should be signed by the developer** to confirm that the dwelling has been constructed or completed according to the specifications set out in the report.
- The photographs should be made available to the energy assessor and the building control body.

Photographic evidence is required for every dwelling, to be taken during construction of key junctions and other aspects of the thermal envelope prior to closing up works, and in accordance with the requirements in Appendix B. Geolocation is required to confirm the location, date and time of each image, with images provided with plot and detail specific referencing.

The requirement for photographic evidence to be collated during the build process for each home and provided to the energy assessor and Building Control as required. There is no restriction on the appropriate party to gather and collate this evidence – trade operatives can take these photographs.

Heat Networks

The government wishes to continue to support heat networks, therefore **exsting** networks will be assessed utilising the actual emission and primary energy factors of the network as the baseline for regulatory compliance calculations – subject to an upper limit – and not compared with a gas boiler notional dwelling. This means that existing networks with CHP systems will not be excessively penalised.

For new networks the gas boiler notional dwelling is used to set the TER. All heat sources up to 2027 should be included when calculating primary energy and carbon emissions factors, encouraging and allowing for future network decarbonisation.

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Approved Document O

Overheating

Significant changes to the assessment of overheating risk are proposed:

Simplified Methodology

This adopts a risk-based assessment which distinguishes between urban and some suburban areas of London and central Manchester (Significant Risk) and other areas of England (Moderate Risk). The specific requirements within these designations are then split between dwellings with or without cross-ventilation (windows on opposite sides) and include

- Limiting unwanted solar gain – maximum area of glazing based on orientation, maximum area for the highest glazed room and shading for buildings in high risk areas
- Removing exess heat – all buildings to meet minimum free opening areas to remove heat. Part F purge ventilation requirements must also be met.
- Limitations – method is not suitable for buildings with more than one residential unit which use a communal heating system with signficant distribution pipework

The simplified method is now easier to achieve then in the previously published draft of this document.

Dynamic Simulation

Dwellings may alternatively be assessed using dynamic simulation to meet the parameters set out in CIBSE TM59. The dwellings should meet the requirements without the need for mechanical ventilation.

Providing Information

Sufficient information about the overheating strategy and its maintenance requirements must be given to owners so that it can be used effectively. The information should be provided in a clear manner, for a non-technical audience.

Noise, pollution and security

The overheating strategy should take account of the likelihood of windows being closed during sleeping hours, especially where external noise levels exceed 40dB average.

Buildings located near to pollution sources should be designed to minimise intake of pollutants.

Where openable windows are part of the strategy, security implications must be considered.

Approved Document S

Electric Vehicle Charging

Requirements for the provision of electric vehicle charging are included in new Approved Document S. With respect to residential development, this requires

- All new individual homes with associated on-plot parking must have an electric vehicle charging point
- Buildings containing multiple dwellings should have charging points totalling the number of associated parking spaces (where there are fewer spaces than dwellings) or where there are more spaces than dwellings, equivalent to one charging point per dwelling.

These requirements are subject to a cost cap of an average of £3,600 for each connection and a number of additional considerations as set out within the Regulations.

Please contact AES to discuss any of the content of this document

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