# **Iceni** Briefing Note

## FUTURE HOMES STANDARD, FUTURE BUILDINGS STANDARD AND PART L:2021 | JUNE 2022

# Future Homes Standard and Future Buildings Standard

## INTRODUCTION

This briefing note has been produced as a summary of the current and forthcoming regulatory changes developed by the UK Government through the implementation of the Future Homes Standard (relating to tighter Building Regulations for dwellings) and the Future Buildings Standard (relating to tighter Building Regulations for all buildings other than dwellings).

The drive to deliver efficiencies in new buildings is to be implemented in stages. Firstly through an immediate partial uplift to the both sets of relevant Building Regulations in 2021 (coming into force June 2022). Secondly through significantly tighter full standards to be brought into force in 2025 - The Future Homes Standard and the Future Buildings Standard.

The first section of this briefing note relates to the uplift in the efficiency of dwellings (or domestic buildings), whilst the second section relates to commercial buildings (or non-domestic buildings).

# Future Homes Standard

## BACKGROUND - THE FUTURE HOMES STANDARD

On the 27th June 2019, the UK committed to achieving net zero greenhouse gas emissions by 2050. Currently, the built environment accounts for 25% of the UK's greenhouse gas emissions. Whilst considerable improvements have been made within this sector, there is still a way to go to fully decarbonise homes to help meet the 2050 target.

Within the Spring Statement 2019, the Chancellor announced the Future Homes Standard 2025. The Future Homes Standard consultation was launched in October 2019. The relevant elements of this briefing note provide a summary of the of the changes which were confirmed in January 2021 and subsequent overheating standards that were published in December 2021.

## TIMELINE OF CHANGES - THE FUTURE HOMES STANDARD

| | |
|---|---|
| **Phase 1 - Introduce interim 2021 Part L uplift for all building types** | |
| Jan 2021 | Draft approved documents for Part L, Part F and Overheating published |
| Dec 2021 | Interim Part L, Part F and Overheating Regulations introduced for domestic and non-domestic buildings |
| June 2022 | Part L, Part F and Overheating Regulations came into effect<br>Developers must submit building notice / initial notice or deposit plans by June 2022 for transitional arrangements to apply |
| **Phase 2 - Technical work and engagement** | |
| Ongoing | Industry engagement, including through Building Regulations Advisory Committee and technical working groups |
| Autumn 2021 - Summer 2022 | Research and analysis to develop proposed technical specification for the Future Homes Standard |
| Summer 2022 - 2024 | Develop sector-specific guidance and embed understanding of the technical specification of the Future Homes Standard |
| **Phase 3 - Consultation & policy development** | |
| Spring 2023 | Technical consultation on the proposed specification for the Future Homes Standard |
| **Phase 4 - Full Future Homes Standard implementation** | |
| 2024 | Part L Future Homes Standard Regulations introduced |
| 2025 | Part L Future Homes Standard Regulations come into effect |


# Future Homes Standard

## PART L STANDARDS FOR NEW HOMES FROM 2021

The Future Homes Standard (FHS) will mandate the end of fossil fuel heating systems in new homes from 2025 onward to target "world-leading levels of energy efficiency". As the electricity grid continues to decarbonise, homes built to the FHS will become net zero carbon over time, with no need for carbon offset payments, future adaptations or changes as they will not rely on fossil fuels for heating.

In order to achieve the 2050 net zero greenhouse emissions target, an uplift to the current energy performance requirements in the Building Regulations will need to be implemented. As a stepping stone to the Future Homes Standard being implemented in 2025, a 2021 interim uplift to Part L has been introduced. Homes built to the Part L:2021 standard will produce 31% less carbon dioxide emissions when compared to the Part L:2013 standards.

Compliance with Part L is partially achieved by comparing actual building emissions with those from a 'notional' building. The specification of the notional dwellings for Part L:2021 and the indicative FHS are detailed below. Note that these do not indicate required build standards.

| | Part L:2013 | Part L:2021 | Indicative FHS Specification |
|---|---|---|---|
| External wall u-value ($W/m^2K$) | 0.18 | 0.18 | 0.15 |
| Roof u-value ($W/m^2K$) | 0.13 | 0.11 | 0.11 |
| Floor u-value ($W/m^2K$) | 0.13 | 0.13 | 0.11 |
| Window u-value ($W/m^2K$) | 1.40 | 1.20 (double glazing) | 0.80 (triple glazing) |
| Ventilation system | Natural with extract fans | | |
| Air permeability ($m^3/h.m^2$ at 50Pa) | 5 | | |
| Space heating source | Condensing gas boiler | | Low carbon heating (e.g. heat pump) |
| Heat emitters | Standard radiators | Low temperature heating | |
| Waste water heat recovery (WWHR) | No | Yes | No |
| y-value ($W/m^2K$) | 0.05 | | |
| PV installation area | - | 40% ground floor area | - |

## LOCAL POLICY CHANGES

The Planning and Energy Act 2008 (as amended) currently allows local planning authorities to set policies within their Local Plans that require the energy efficiency performance of new homes to exceed Building Regulations Part L standards.

The consultation proposed an amendment to the Act to restrict local planning authorities from setting individual targets that exceed Building Regulations requirements. This would have resulted in all local planning authorities requiring new homes to be built to the same national standard.

Following consultation however, it is intended that the long-term role of local planning authorities in setting carbon reduction standards will be clarified and considered in due course. To provide certainty in the immediate term, the Planning and Energy Act 2008 will remain as it currently is, meaning local authorities will retain powers to set local energy efficiency standards for new homes above those imposed by national policies.

## APPROVED DOCUMENT ON OVERHEATING

Alongside the publication of the government's response to the Future Buildings Standard consultation, the Approved Document O, relating to overheating was formally released in December 2021. The Approved Document provides guidance on mitigating overheating risk through the Building Regulations and confirms the requirements as follows:

- **The Simplified Method** - compliance may be demonstrated through this method according to the location of the dwelling (either specified high risk areas in Greater London, or not) and whether or not the dwelling facilitates cross-ventilation (i.e. openings on opposite facades). Based on this, dwellings with cross-ventilation within "high risk areas" are restricted (based on largest glazed facade orientation) to a maximum glazing area between 15% - 18% of the floor area, whilst outside these high risk areas, maximum glazing areas are restricted to between 11% - 18% of floor area. Maximum glazing areas for the most glazed room are now also provided; and
- **The Dynamic Thermal Analysis Method** - where compliance is not demonstrated through the Simplified Method above (for instance where the building is not well represented by the two locations above), or where developers wish to have more flexibility in preventing overheating, the CIBSE's TM59 methodology for predicting overheating risk should be employed. Notably, further to comments received from stakeholders, government will be working with CIBSE to rationalise TM59 and the approved guidance as some existing differences may cause confusion.

# Future Homes Standard

## CHANGES TO PART L OF THE BUILDING REGULATIONS

### Performance-based targets

The following four performance metrics will be used for new homes through Part L:2021:

**1. Primary Energy Target**

Primary energy use is a measure of the energy regulated by the energy efficiency requirements of the Building Regulations, such as lighting, heating and hot water. The calculation takes account of efficiencies and energy uses such as:

- The efficiency of the property's heating system;
- Power station efficiency for electricity; and
- Energy used to produce fuel and deliver it to the property.

A primary energy metric therefore provides a measure of the energy use in dwellings and takes account of upstream energy uses. This will ensure that new homes are energy efficient and making good use of our nation's energy resources regardless of our wider progress towards decarbonising the electricity grid.

**2. $CO_2$ Emission Target**

Despite the focus on improving the energy efficiency of new dwellings, $CO_2$ emissions targets and measures will continue to be used alongside primary energy targets, in order to drive low carbon choices in all scenarios and to track progress against the UK's net zero target.

**3. Fabric Energy Efficiency Targets**

Many stakeholders expressed concern that removing the Fabric Energy Efficiency Standard (FEES) metric could in some circumstances lead to lower fabric energy efficiency than desirable when heat pumps are installed in a new home. As it is recognised that the fabric first approach is sound, it is therefore confirmed that, as part of the transition the Future Homes Standard in 2025, the Fabric Energy Efficiency Standard will be retained as a performance metric in Part L:2021.

Further, following the conclusion of the Future Buildings Standard consultation, it is confirmed that the government will proceed with its preferred option to apply a more stringent full FEES and therefore encourage a fabric first approach through the Part L:2021 uplift.

**4. Minimum Standards for Fabric and Fixed Building Services**

As proposed in the Future Homes Standard consultation, minimum standards for thermal elements will be introduced, which will remove the worst performing 25% of each thermal element currently being built.

It is noted that the government anticipates that the Fabric Energy Efficiency Standard proposed in *The Future Buildings Standard* consultation, combined with the minimum fabric standards, will drive high overall fabric standards in new homes, while allowing some flexibility in how the Target Fabric Energy Efficiency Rating is met. Therefore, as the Fabric Energy Efficiency Standard is to be retained, minimum U-values for thermal elements will continue to be set within the Approved Document.

## BUILD QUALITY

Following the Hackitt Review of Building Regulations and Fire Safety, the guidance documents that accompany Parts L and F of the Building Regulations have been restructured, in order to more clearly set out the expectations of home builders and developers in complying with the regulatory requirements. Much of the supplementary information removed from the Approved Documents has been deemed to fall outside of the scope of the Building Regulations, however the following information has been retained:

- A section on commissioning;
- A section on Energy Performance Certificates; and
- A reference and definition under the system specific guidance regarding domestic water heating.

In order to address the performance gap between design intent and actual built performance, the Building Quality guidance has been amended:

- The consultation version of the document has been updated with additional information.
- The guidance now includes an introduction referencing the Local Authority Building Control (LABC) construction details library.
- A section has been added to clarify what will be expected for obtaining photographic evidence.

Furthermore, a new compliance report - Building Regulations England Part L (BREL) - has been introduced. This sets a standard approach to providing building information, thus improving compliance. It is intended that the BREL will be incorporated within SAP 10.2, which is to be released alongside the uplift to Part L in 2021. In addition, the version of Part L to which a home is built will be specified on the Energy Performance Certificate from 2022 onward to provide clarity to consumers with regards to the energy efficiency level of their home. This will be accompanied by a Homes User Guide, which is to be formatted in accordance with the new *Approved Document L, Volume 1: Dwellings.*

# Future Homes Standard

## CHANGES TO THE ASSESSMENT PROCESS

The latest version of SAP, which will be SAP 10.2, will be adopted at the implementation of Part L:2021.

It is intended that SAP 11 will be implemented alongside the Future Homes Standard. In preparation for this, additional options, such as the ability to undertake modelling using dynamic thermal tools, will be investigated, with consultation on such changes to take place closer to the time.

## LOW CARBON, RENEWABLE AND ALTERNATIVE TECHNOLOGIES

Although the installation of gas boilers in new dwellings will continue to be acceptable up until 2025, it is noted that as many homes as possible will need to be built with low carbon heating going forwards. It is believed that the confirmation of the timeline for the Future Homes Standard will encourage investment in low carbon heating as well as the training and upskilling required to successfully implement the Standard from 2025.

Furthermore, it is believed that the following Government policy announcements will help build demand for low carbon heating:

- The Prime Minister's 10 Point Plan for a Green Industrial Revolution announced an ambition to grow the heat pump market to 600,000 installations per year by 2028.
- Through the publication (October 2021) of the Net Zero Strategy, the government has confirmed an ambition to phase out the installation of new and replacement gas boilers by 2035 and to support 240,000 green skilled jobs by 2035. A number of announcements have also been made to support the scaling up of the heat pump market and to reduce associated costs by 25-50% by 2025.
- The Clean Growth Strategy committed to phasing out the installation of high carbon fossil fuel heating in buildings not connected to the gas grid, starting with new build, during the 2020s.
- The government's Heat and Buildings Strategy (published October 2021) provides broader guidance on achieving net zero by 2050.

# Future Buildings Standard

## BACKGROUND - THE FUTURE BUILDINGS STANDARD

On the 15th December 2021, the government issued its formal response to the consultation on the Future Buildings Standard (FBS). The FBS will deliver new non-domestic buildings that are zero-carbon ready from 2025 onward, which use low-carbon heat, and which have the best fabric standards possible. As the electricity grid continues to decarbonise, buildings built to the FBS will become net zero carbon over time, with no need for further energy efficiency retrofit work as they will not rely on fossil fuels for heating and hot water.

## PART L STANDARDS FOR NEW NON-DOMESTIC BUILDINGS FROM 2022

In order to achieve the 2050 net zero greenhouse emissions target, an uplift to the current energy performance requirements in the Building Regulations will need to be implemented. As a stepping stone to the Future Buildings Standard being implemented in 2025, a 2021 interim uplift to Part L hes been introduced. Non-domestic buildings built to the Part L:2021 standard will produce 27% less carbon dioxide emissions when compared to the Part L:2013 standards.

Compliance with Part L is partially achieved by comparing actual building emissions with those from a 'notional' building. The specification of the notional buildings for Part L:2021 are detailed below. Note that these do not indicate required build standards, and that the proposed u-values are applicable to both new non-domestic buildings and new thermal elements for existing buildings.

| | Part L:2013 | Part L:2021 |
|---|---|---|
| Pitched roof u-value (W/m²K) | 0.25 | 0.16 |
| Flat roof u-value (W/m²K) | 0.25 | 0.18 |
| External wall u-value (W/m²K) | 0.35 | 0.26 |
| Floor u-value (W/m²K) | 0.25 | 0.18 |
| Swimming pool basin u-value (W/m²K) | 0.25 | 0.25 |
| Windows in buildings similar to dwellings u-value (W/m²K) | 2.2 | 1.6 or Window Energy Rating Band B |
| Rooflight u-value (W/m²K) | 2.2 | 2.2 (horizontal plane) |
| All other windows, roof windows and curtain walling u-value (W/m²K) | 2.2 | 1.6 |
| Pedestrian doors (including glazed doors) u-value (W/m²K) | 2.2 | 1.4 |
| High usage entrance doors u-value (W/m²K) | 3.5 | 3.0 |
| Vehicle access or similar large doors u-value (W/m²K) | 1.5 | 1.3 |
| Roof ventilators (including smoke vents) u-value (W/m²K) | 3.5 | 3.0 |
| Air permeability (m³/h.m² at 50Pa) | 10 | 8 |

## LOW CARBON HEATING IN NEW NON-DOMESTIC BUILDINGS

Due to the wide range of uses of non-domestic buildings covered by the Future Buildings Standard, it is intended that non-domestic buildings are split into three broad types of space and water heating demand, as follows:

| Demand Type | Building Type |
|---|---|
| **Type 1 demand:** space heating demand more suitable for heat pumps. Domestic hot water demand more suitable for point-of-use or heat pump. | Offices, multi-residential buildings, prisons, primary schools, secondary schools,retail units, community centres, courts, libraries, museums, airport terminals, data centres, theatres |
| **Type 2 demand:** space heating demand more suitable for heat pumps. Hight domestic hot water demand, which may be less suitable to be provided using point-of-use or heat pumps. | Hotels, hospitals, other health care buildings, restaurants |
| **Type 3 demand:** space heating demand less suitable for heat pumps. Domestic hot water demand more suitable for point-of-use or heat pump. | Retail warehouses, distribution warehouses, industrial process buildings, sports halls |

The Government will further consider this split of building types through a future technical consultation.

# Future Homes Standard and Future Buildings Standard

## TRANSITIONING TO THE NEW STANDARDS

Currently, a development must conform to the energy standards in place at the time the planning permission was granted, and when work on-site begins.

Under the new standards, where a building notice, initial notice or full plans deposit was submitted before the new energy efficiency standards came into force, transitional arrangements may only be applied to individual buildings on which building work has started within a reasonable period. The length of the reasonable period has been set as 12 months from when the Regulations came into effect to commence work on each individual building on-site, as opposed to the entire site. This is in line with the reasonable period in place for the 2013 Part L uplift, however, it is recognised that applying this to individual buildings is a significant change to the previous site-wide approach.

The transitional arrangements, which support the implementation of the 2021 Part L uplift, and which will also support the wider implementation of the Future Homes Standard and Future Buildings Standard in 2025, are:

### Transitional arrangements in practice

For transitional arrangements to apply to an individual building, developers will need to both:

i) Submit a building / initial notice or deposited plans by June 2022; and

ii) Commence work on each individual building by June 2023.

Where notices or plans are submitted after June 2022, transitional arrangements will not apply and buildings must be built in line with 2021 Part L standards.

Where notices or plans are submitted before June 2022, but work on any individual building does not commence by June 2023, the buildings that have not yet commenced must be built in line with 2021 Part L standards.

No individual building will need to change once building work has commenced, as long as work commences within the reasonable period. However, developers will need to plan their sites appropriately and if work on a building commences outside of the reasonable period, they will need to ensure that it is compliant with new standards.

For the purposes of transition, commencement will not change from the existing 2013 definitions:

- Excavation for strip or trench foundations or pad footings.
- Digging out and preparation for raft foundations.
- Vibrofloatation (stone columns) piling, boring for piles or pile driving.
- Drainage work specific to the building(s) concerned.

## BUILDING REGULATIONS: APPROVED DOCUMENTS L AND F

Approved Documents L and F of the Building Regulations have been published and can be viewed through Gov.uk.

### Approved Document L - Conservation of fuel and power

Approved Document L Volume1: Dwellings and Approved Document L Volume 2: Buildings other than dwellings provide guidance on compliance with the 2021 uplift in energy efficiency requirements. In summary, these documents contain guidance on:

- Calculating the Target Primary Energy Rate and Target Emission Rate;
- Calculating the Domestic/Building Primary Energy Rate and the Domestic/Building Emission Rate;
- Consideration of high efficiency alternative systems;
- Limiting heat gains and losses;
- Minimum building services efficiencies and controls - general and system-specific guidance;
- Air permeability and pressure testing;
- Commissioning and providing information;
- New elements in existing buildings, including extensions;
- Work to elements in existing dwellings/buildings; and
- Consequential improvements.

### Approved Document F - Ventilation

Approved Document F Volume 1: Dwellings and Approved Document F Volume 2: Buildings other than dwellings provide guidance on ensuring levels of ventilation are compliant with the Future Homes Standard requirements. In summary, these documents contain guidance on:

- Ventilation provision;
- Minimising the ingress of external pollutants;
- Work on existing dwellings/buildings; and
- Commissioning and providing information.

## CONTACT US

If you have any further queries regarding the changes to the Building Regulations or what the implementation of the Future Homes Standard and/or Future Buildings Standard means for your scheme, please don't hesitate to get in touch with a member of our team.


**Alex Green**
Director, Iceni Futures
e: agreen@iceniprojects.com
t: 020 3958 6125
m: 07881 904 598

**Grace Wileman**
Senior Consultant, Iceni Futures
e: gwileman@iceniprojects.com
t: 020 3435 4227
m: 07807 350 354

# The Sustainable Development Scorecard

The National Planning Policy Framework (NPPF) has running throughout it the 'golden thread of sustainable development'. In spite of this, there is no clear-cut, NPPF-based assessment criteria to consider a site or project's sustainable development credentials, making current assessment processes both tricky and subjective.

The Sustainable Development Commission was established to address this recognised issue with our planning system. Made up of a balanced cross-section of industry professionals, the Commission has debated the issues and found solutions, culminating in the creation of the Sustainable Development Scorecard.

The Scorecard website is free to use and accessible to anyone with a vested interest in development, including developers, architects, planners, community groups and members of the public. By crystallising the NPPF's guidance into a simple, online analysis tool, the Commission aims to provide a more consistent approach to sustainable development, leading to a more sustainable built environment.

**www.thescorecard.org.uk**