

# IEQ and Building Standards

The role of the new Building Safety Regulator Jack Hulme

14 June 2023

## **The Building Safety Regulator**



**April 2023:** Development of technical standards for the Building Regulations in England passed to new Building Safety Regulator (BSR)

- Approved Document Guidance e g.
  - Approved Document F (Ventilation)
  - Approved Document C (includes Radon)
  - Approved Document J (Combustion Appliances)
  - Approved Document O (Overheating)
  - Approved Document L (Energy Efficiency)
- New duties on regulator relating to all buildings

## **Building Safety Act: Section 5 duty**



The Building Safety Act 2022 defines the duties for the new regulator.

Of particular relevance may be the "Section 5 duty":

#### 5. Duty to keep safety and standard of buildings under review

The regulator must keep under review—

(a)the safety of people in or about buildings in relation to risks as regards buildings, and

(b)the standard of buildings.

#### **2021 introduction of Approved Document O**



New Guidance and Regulation to mitigate overheating risk in new residential buildings.

**Two methods** to demonstrate compliance:

#### **Simplified Method**

- Dependent on a combination of built form and geographical location:
  - Buildings in London are more likely to overheat
  - Single aspect flats are more likely to overheat
- Includes shading and ventilation

#### **Dynamic Method**

- Uses CIBSE TM59
- Uses the following to calculate overheating risk:
  - Location
  - Materials' properties
  - Orientation
  - Air change rates
  - Occupancy scenario
- A more flexible method

### 2021 updates to Approved Document F



New guidance on installing background ventilation when replacing windows.



If not mechanical supply and extract ventilated, replacing windows likely to reduce useful ventilation

Install background ventilation



#### 2021 updates to Approved Document F



New methods to determine if ventilation provision is sufficient when common energy efficiency work is undertaken

1. Simplified Method. Determine major and minor measures, then:

		Number of minor measures						
		0	1	2	3	4	5	6
Number of major measures	0		Category A					
	1	Category B						
	2							
	3		Category C					
	4							

Category A	No further ventilation needed
Category B	Further ventilation likely needed, in line with guidance for the relevant system.
Category C	Building will be more airtight. Further ventilation likely needed, in line with guidance for the relevant system. Expert advice should be sought for natural ventilation systems.

2. Seek expert advice – likely involves carrying out airtightness test.

#### **2021 Updates to Approved Document F**



#### Standards in offices:





Indoor air quality monitoring (CO<sub>2</sub>)



Systems that recirculate air should be capable of providing outdoor air only if needed unless HEPA filters can be installed or UVC-cleaning system in place



Outdoor air rate now set as per l/s/m<sup>2</sup> as well as l/s/per.

Outdoor air rate of 0.5 l/s/m<sup>2</sup> for common spaces including corridors and lift lobbies.



Bathroom extract fans capable of being "always on"

#### Rooms where:

- singing, loud speech or aerobic exercise may take place
- Low temp and low humidity environments
- Where members of the public are likely to gather



Indoor air quality monitoring (CO<sub>2</sub>)



## 2022 updates to Approved Document J



- a. Carbon monoxide alarm should be fitted upon the installation of fixed combustion appliances that burn solid fuels, gas fuels (excluding gas appliances used solely for cooking) and oil fuels
- b. Guidance on certification of alarms (BS EN 50291) and other specifications.
- c. Guidance on placement of alarms.

## **The Building Safety Regulator**



- New regulator with specific duties relating to safety and standards of all buildings.
- Responsible for the development of the technical standards of the Building Regulations.
- Welcome new data and research to support our duties and development of standards.



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