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What Facilities Managers Need to Know about Indoor Air Quality

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Indoor air quality (IAQ) has become a critical focus in facilities management, driven by increasing awareness of the health risks associated with poor ventilation. Here, David Millward, Product Manager at Elta Group outlines the essential elements of IAQ and the steps needed to maintain optimal air quality.

Understanding the key factors of IAQ

Air quality is influenced by several factors, including ventilation, temperature control, humidity, and the presence of airborne contaminants such as volatile organic compounds (VOCs) and particulate matter. While much attention is paid to temperature and lighting in facilities, air quality can be overlooked despite its critical importance to occupant well-being.

Effective ventilation is the cornerstone of good IAQ as it helps to control indoor pollution levels by diluting contaminants and removing stale air from enclosed spaces. The UK Building Regulations (Part F) outline ventilation requirements, which facilities managers must comply with. Ensuring that systems are well-maintained and operating efficiently is a fundamental part of meeting these standards.

Mould and mildew growth can be accelerated by excessive moisture, negatively impacting air quality and potentially causing respiratory issues for building occupants. High humidity levels — especially in areas such as bathrooms, kitchens and basements — should be controlled through proper ventilation systems like Mechanical Ventilation with Heat Recovery (MVHR).

Legal standards

In recent years, there have been significant legislative shifts aimed at improving IAQ in rental properties,

particularly in light of tragic events such as the death of two-year-old Awaab Ishak, who succumbed to the effects of mould exposure in his home. Awaab's Law is set to make it a legal requirement for landlords to remedy damp and mould issues within a strict 14-day limit.

For facilities managers, it is key to stay ahead of these legal requirements and ensure compliance with regulations. Mitigating the risks of IAQ-related hazards — such as damp, mould, and airborne pathogens — is possible by making sure that ventilation systems are properly monitored and regularly maintained.

Monitoring and maintenance

Best practice when it comes to monitoring will depend on the specifics of the building. It may include the use of sensors to track levels of carbon dioxide (CO2), humidity, and airborne particulates, which can provide real-time data on the indoor environment.

Facilities managers should assess whether existing systems are up to standard, especially in older buildings that may lack adequate ventilation. Continuous mechanical extract ventilation (MEV) and decentralised MEV (dMEV) systems are recommended for controlling moisture levels throughout the year. These systems ensure continuous airflow, preventing the build-up of condensation that can lead to mould.

With modern systems, intelligent ventilation units can automatically adjust airflow based on the moisture content and temperature of incoming air, providing optimal comfort for occupants without excessive energy costs. These innovations allow facilities managers to be both energy-efficient and proactive in maintaining IAQ.

Educating occupants

The role facilities managers play in IAQ does not stop once the building's ventilation systems are functioning effectively; they also have an important part in educating tenants and occupants on how their behaviour can influence IAQ. For instance, tenant practices such as drying clothes indoors or failing to use extractor fans in kitchens and bathrooms can increase humidity levels and worsen condensation. Providing occupants with guidelines on proper ventilation practices can help mitigate these risks.

Furthermore, with the rise of fuel poverty, many occupants may be reluctant to use heating systems, inadvertently contributing to the problem by keeping their homes cooler and more prone to condensation. This is especially concerning as we head into a cold winter. Facilities managers can offer advice on balancing heating and ventilation to prevent these issues from escalating.

Preparing for seasonal changes

The colder months often bring heightened concerns about IAQ, as buildings are closed off from external airflow, and moisture inside homes increases from activities such as cooking and drying clothes. Facilities managers should prepare in advance for this 'condensation season' by ensuring all ventilation systems are inspected and functioning effectively.

With the rollout of Awaab's Law and the growing recognition of IAQ as a public health issue, facilities managers may face higher demand for ventilation products and systems during this period. It's essential to secure reliable sources of supply for fans, extractors, and other essential equipment.

As the legal and health imperatives surrounding indoor air quality continue to evolve, facilities managers must remain vigilant and proactive. By understanding the factors that influence IAQ and implementing robust ventilation and maintenance strategies, they can ensure that the indoor environments they manage remain healthy and compliant with the latest regulations. In doing so, they not only protect building occupants but also safeguard the long-term value and sustainability of the properties under their care.

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