

Air



Air

A Varied Mix

Every breath you take introduces to your body a mixture of varied composition made up of gases, volatile compounds and suspended materials. Generally this will comprise around 79% nitrogen and 20% oxygen with little variation. The make-up of the remainder is minor in percentage terms but it is the composition of this remainder that has the greatest effect on health and comfort.

As the average individual spends a large proportion of time indoors, the quality of the indoor environment has a significant bearing with the presence of small amounts of contaminant magnified by being contained. Reduced air quality can impair occupants' perception of the workplace and impact on health. Within UK workplaces the law requires compliance with The Control of Substances Hazardous to Health Regulations and the office environment is no exception.

Sick Building Syndrome

In the most extreme cases, poor air quality can lead to high numbers of building occupants suffering from illness related to the workplace. In fact, few buildings are actually found to be 'sick'. More commonly encountered are building related illnesses where a few individuals become sensitised to microbial or chemical contaminants and suffer adverse health effects as a result. Identifying the causes of these illnesses often involves detailed scientific investigation and once a cause has been identified remedial solutions can often be costly, if they are available at all. Prevention by good design and close monitoring is definitely better than cure.

Comfort & Health

Indoor air quality is an issue of increasing importance within offices, hospitals and similar buildings. Every enclosed workplace is required to be ventilated with a sufficient quantity of fresh or purified air. An additional requirement is that temperature and by inference relative humidity be kept reasonable. Any mechanical ventilation systems are required to be kept clean and properly maintained. This, however, merely establishes the basics, and beyond is a lengthy list of other parameters affecting occupant comfort that require consideration. Key amongst these are:

- Temperature
- Relative humidity
- Air movement

- Carbon dioxide
- Combustion products
- Volatile organo compounds
- Ozone
- Airborne particulates
- Bacteria and fungi

Operation of a routine on-going monitoring programme for these parameters will establish a baseline operating range for the location and enable variations or potential problems to be identified and resolved at an early stage.

Investigation

First Environment has undertaken detailed site investigation to identify and resolve numerous issues presented. These have ranged from identifying the source of mal-odours to tracing the environmental root cause for failure in mainframe computers. Application of good science has enabled seemingly intractable problems to be solved often identifying a surprising underlying cause. Our experience in this area enables an appropriate investigation strategy to be devised at an early stage to investigate problems presented.

First Environment Provides

First Environment provides the technical expertise to assist client organisations to implement management solutions for all aspects of indoor air quality. Including

- Survey of air distribution arrangements.
- Indoor air quality monitoring.
- Investigation of odour, health and comfort complaint.
- Advice on improvement works, cleaning and treatment.
- Preparation of policy documents and record systems.
- Independent on-going inspection and audit.

As an independent company First Environment is able to consider all available options and assist our clients in implementing the most appropriate strategy for managing indoor air quality for their location.

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