

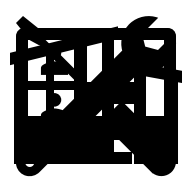


Creating the best possible experience & environment for you, your employees & your customers

Employers equally have a tremendous role to play in delivering a **safer workplace strategy**



... getting people back to work, safe & productive is our responsibility



A safe* workplace

Was & still is ...

in good repair

safe and working efficiently

putting right dangerous defects

Increasingly important ...



your duty of care

* Safe = protected from or not exposed to danger or risk



We consume more air than water & food

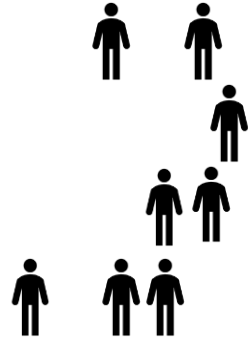
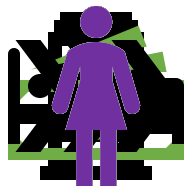
Indoor air is
2-5x
DIRTIER
than outdoor air

Source: EPA

Bacteria & Viruses Allergens Pollution & VOC's Odours

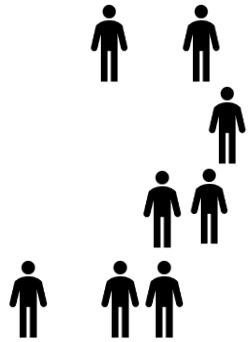
The complex block features a blue background on the left and a dark blue background on the right. The text 'Indoor air is 2-5x DIRTIER than outdoor air' is centered in the blue area. Below it, the source 'Source: EPA' is noted. The right side contains four circular icons: 'Bacteria & Viruses' (microscopic organisms), 'Allergens' (dandelion and pollen), 'Pollution & VOC's' (spray bottle and paint can), and 'Odours' (trash can with steam).

& why care about air?



The average business has **50** people

We take on average **5.8** sick days per year



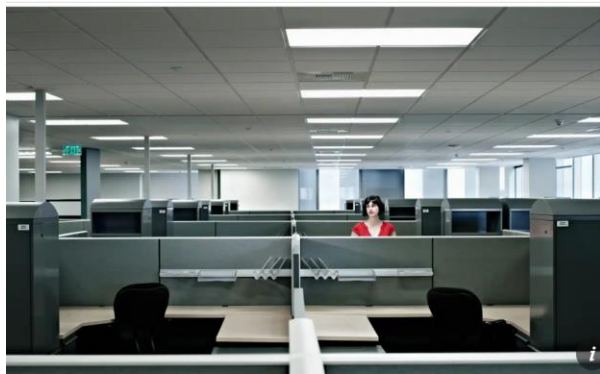
= **290** days lost per year



Costing the average businesses circa **£40,000** of productivity per year!

Workplace / safety – the news keeps on spreading

🏢 The Department for Education has pledged to provide 300,000 carbon-dioxide monitors to schools in England from September - to help identify where airflow is limited and viruses may more easily spread.



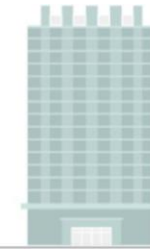
The Observer
Do you have a fear of returning to the office?



Monday 12 April 2021 9:42 am

Almost half of UK office workers ‘scared to return’ to workplace, research shows

Damian Shepherd



79% of senior business leaders and **70%** of general public surveyed said it's likely that people will never return to offices at the same rate as before the pandemic

Source: YouGov for BBC



69% of senior business leaders and **62%** of general public surveyed said that young workers working from home will struggle more to progress in their career than those going into the office

Source: YouGov for BBC



🏢 But WE CAN HELP help manage fears, expectations & longevity ...

Questions every business is asking themselves ...



🏢 What is my duty of care?

🏢 How can managers make workplaces more enticing?

🏢 How do I create a healthy working environment?

What should businesses be doing ...



• Support your workforce



• Keep them productive



• Gain their trust

• Build their confidence

} Wellbeing



What is my **duty of care?** Advice

Government guidance for people responsible for the wellbeing of employees and visitors for indoor environments



What businesses should do to help protect staff and visitors

1. Complete a health and safety risk assessment that includes COVID-19
2. Provide adequate ventilation
3. Clean more often
4. Turn away people with COVID-19 symptoms
5. Communicate and train

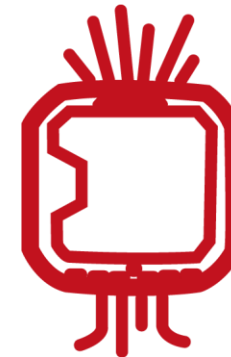


We can help you create a much healthier working environment



Sanitise everything you touch

Clean the air that you breath



Measure & monitor your working environment

The solution is

Safe Suite



Creating the best possible environment for you, your employees & your customers

Introducing SafeSuite™ from PPE Consulting

- A suite of products, tools & services to improve permanence of business life in all indoor environments, including offices & schools

Suite of safety products



- **SmartMister™**
- **SmartMister solution™**
- **AeraMax®**

Our monitoring suite



- **Dashboard**
- **Smart Air Monitoring**
- **Occupancy Monitoring**

Suite of services



- **Installation**
- **Testing – continuity**
- **Consultancy**
- **Training**
- **Review**

01/09/2021

INTRODUCING SMARTMISTER™



SMARTMISTER
The smartest way to sanitise your workplace

Fellowes
AIR PURIFIERS

THE MOST
PREPARED SPACES



ROOM AIR QUALITY
CLEAN
PARTICLES CAPTURED:
99%_{PM2.5}

Introducing Smart Air monitoring from PPE Consulting

What it can do ...

Monitoring



Air Quality

- CO2
- Particulates
- VOC

Temperature / humidity

Room / desk occupancy

Improving



Operations

Capacity

Productivity

Long-term



Adaptable

- Evolving workplace
- Seasonal variation

Scalable

- As your business grows

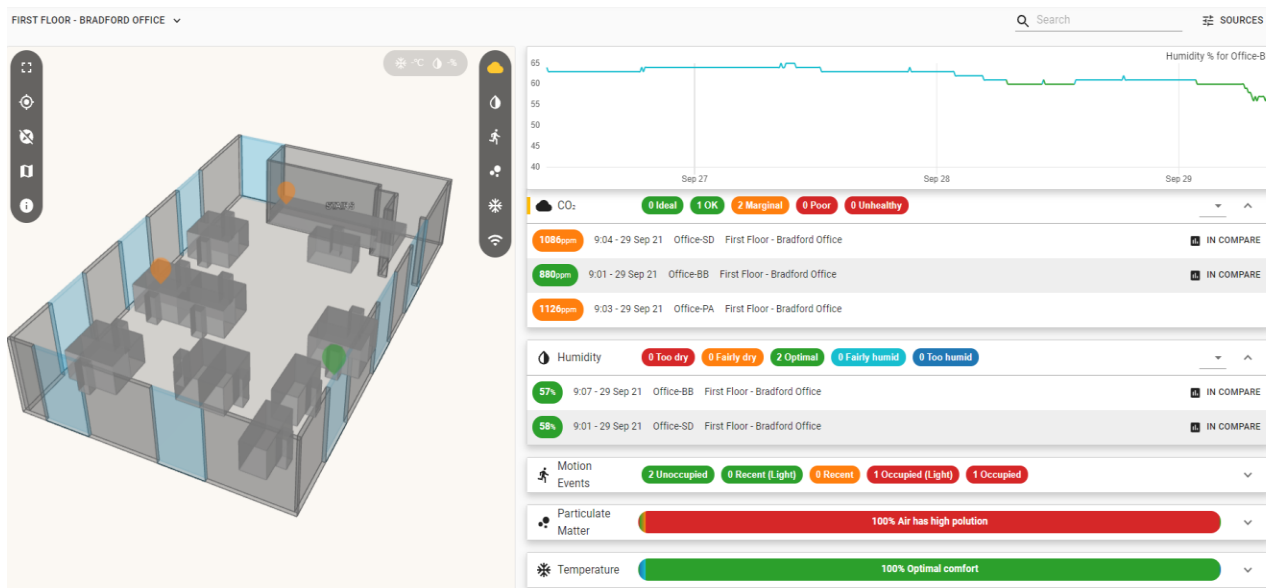


Measure & Monitor

Smart Air Monitoring

Visualise the air that you can't currently see

Dashboard



Improving

Operations

Manage cost using actual data from your building spaces

Capacity

Identify areas of risk, high cost, wasted heating and air conditioning

Productivity

Improve Cognitive skills and reduce fatigue by managing Co2 levels

Safety

safe desk occupancy

What Smart Air Monitoring can do for you...

GROUND FLOOR - BRADFORD OFFICE

Search

SOURCES

Selected Sensors

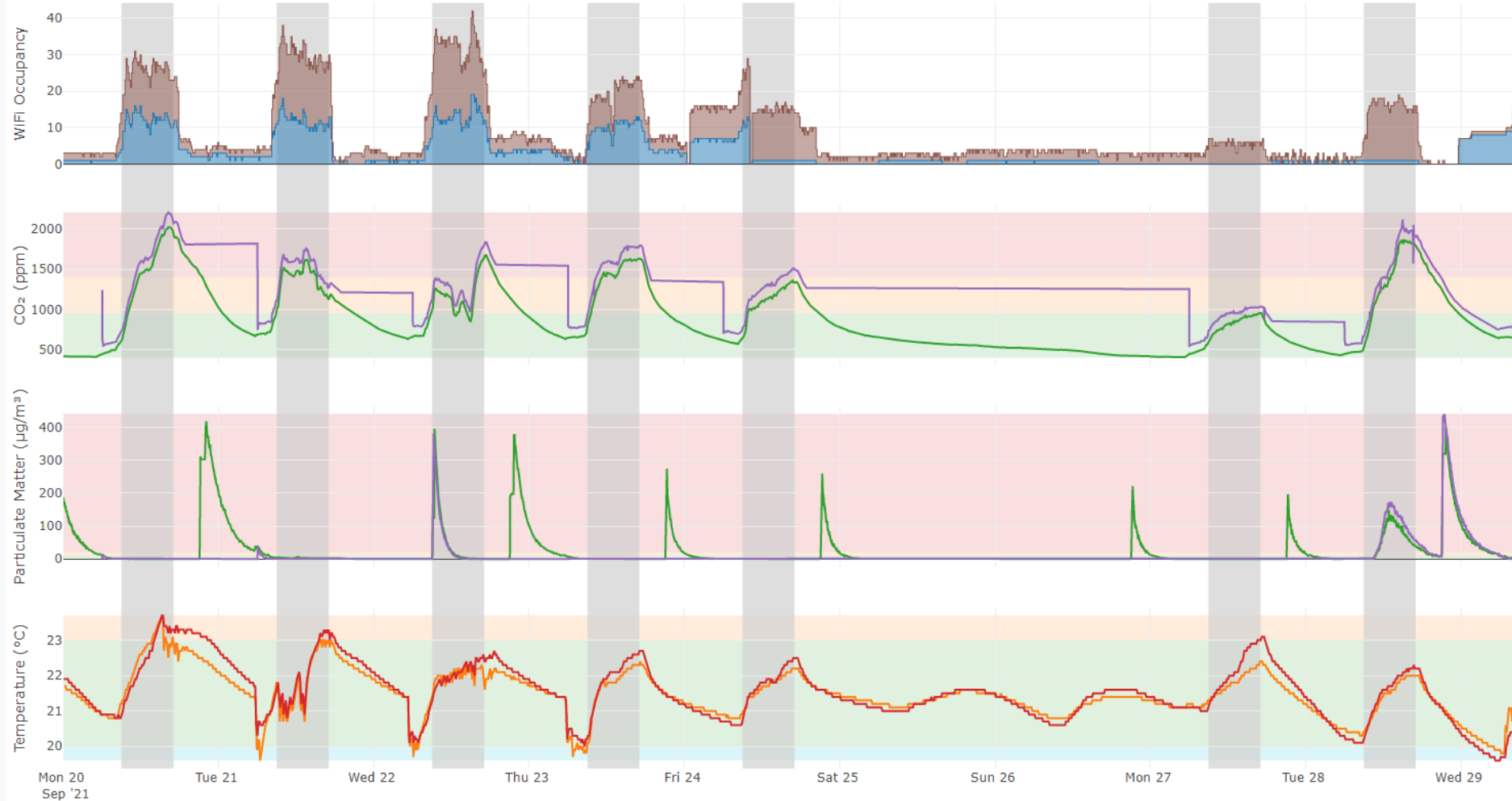
CLEAR ALL

- Base Sensor - Upstairs
 - 47
 - 20
 - 1
- Base Unit - Ground Floor
 - 44
 - 2
 - 1
- Office-BB
 - 57%
 - 21.5 °C
 - 100%
 - 1
- Office-BB
 - 1013 ppm
 - 1
 - 140 µg/m³
- Office-SD
 - 59%
 - 20.9 °C
 - 100%
 - 1
- Office-SD
 - 1168 ppm
 - 1
 - 107 µg/m³

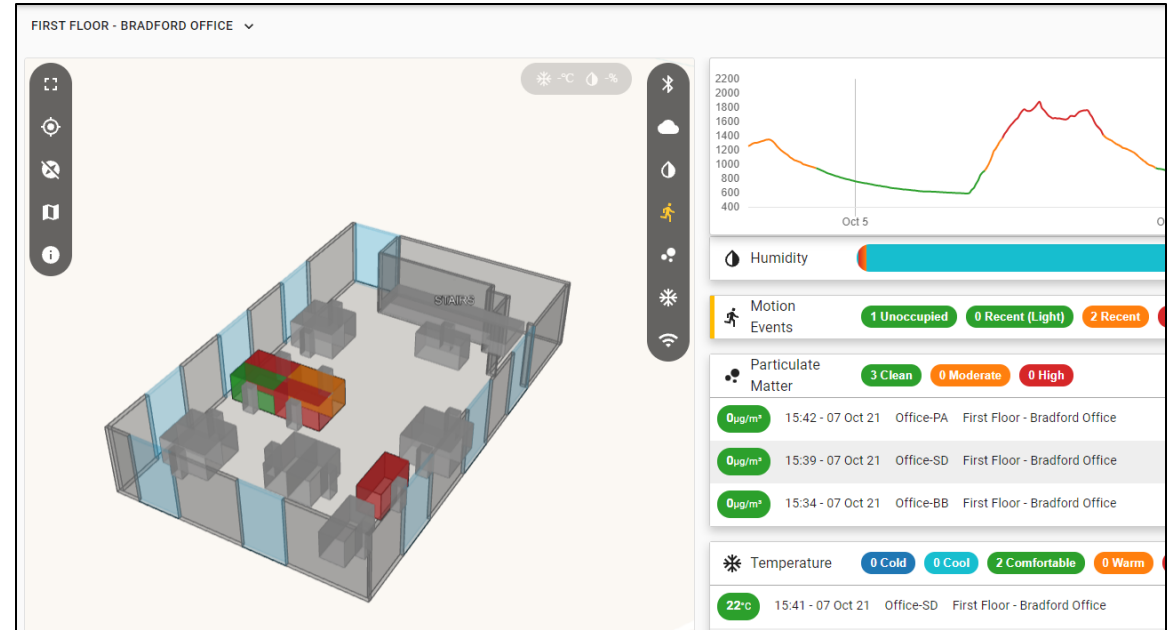
Available Sensors

Show All

- Meeting Room
 - 58%
 - 19.7 °C
 - 100%
 - 1
- Meeting Room
 - 617 ppm
 - 1
 - 4 µg/m³
- Showroom
 - 712 ppm
 - 1
 - 4 µg/m³
- Showroom
 - 58%
 - 19.8 °C
 - 100%
 - 1
- Training Room
 - 670 ppm
 - 1
 - 14 µg/m³



Now you can take control of a better working environment





Getting up & running could be quicker than you think

🏠 6 steps to total peace of mind

- 1** Intro / 1st Contact
- 2** Floor Plans / Site Visit
- 3** Scoping Plan / Estimate / Assumptions
- 4** Send Proposal
- 5** Follow Up / Letter of Intent / On-site Scoping
- 6** Installation

... you're good to go!

& you can create a much healthier working environment

- Introduce a safe air suite to monitor air within the workplace



✓ Good for the workforce



✓ Reduces fatigue



✓ Helps manage costs

- This helps you
 - Manage & improve the office environment
 - Filter out viruses including COVID
 - Ensure the best quality indoor air
 - Provide a safer environment to work in

Good for morale, wellbeing & performance

Let us find the right solution for you



Creating the best possible experience & environment for you, your employees & your customers

CASE STUDY

ATKINS

Member of the SNC-Lavalin Group

As part of our ongoing efforts to make the offices at Heathrow a more safe environment to work in, we have introduced a new Safe Air System to monitor and filter air within the office. This helps us manage and improve the office environment, as well as filtering out viruses including COVID and helps us ensure our air is the best quality.

Heathrow

1

Heathrow – Safe Air System: Why monitor air quality?

🔍 **We can't manage a risk we don't see**

- 🔍 We installed sensors to monitor in-room environment that are important to our health, comfort and performance: carbon dioxide (CO₂), particulate matter (air pollution), temperature and humidity. This gives our staff and managers the power to take action when and where necessary.



🔍 **Good air quality reduces viral transmission risk and increases our ability to concentrate**

- 🔍 When you exhale you release CO₂ into the air. This can lead to CO₂ levels quickly rising in indoor spaces depending on the ventilation and occupancy level. Understanding and minimising indoor CO₂ levels is crucially important for our health ([SAGE](#)) and productivity ([Harvard](#)).

2

Heathrow – Safe Air System: Benefits

🔍 **We can now see potential risks ...**

- 🔍 Without a sensing solution we could not see what our risk levels were. Now, the live 'health' of our building is now visible, and accessible to our staff and office managers.
- 🔍 The transparency gives our staff the confidence to safely return to a good working environment. Sensors visible in the rooms empower staff to take action if necessary.

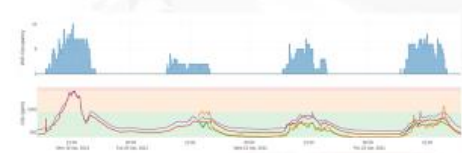


3

Heathrow – Safe Air System: Benefits

🔍 **... and also manage the risks.**

- 🔍 The UK government (SAGE) advises: that multi-occupant spaces that are used regularly and reach CO₂ levels above 1500 ppm should be identified and prioritised for improvement.
- 🔍 Insights from continuous monitoring can feedback into our short-term and long-term workplace strategy, prioritise areas for improvement, and even automate to improve air-flow management.



Summary

Table (below): Minimum, average (mean) and maximum values per sensor.

	Minimum	Average	Maximum
All sensors	397 ppm	721 ppm	1471 ppm
Engineers Office...	398 ppm	726 ppm	1471 ppm
Large PM 2	397 ppm	667 ppm	1115 ppm
PM Office 2	400 ppm	665 ppm	1404 ppm
Project Managers Office	499 ppm	796 ppm	1398 ppm

Table (below): Percentage of time measured in each band range. (For example if the sensor spends 1 of every 4 hours within a particular range and 3 of 4 in another those bands will show 25% and 75%.)

	Great	Ok	Substantial	Severe	Critical
All sensors	36.3%	39.8%	23.9%	0.0%	0.0%
Engineers Office...	24.2%	37.8%	37.9%	0.1%	0.0%
Large PM 2	47.1%	50.5%	2.4%	0.0%	0.0%
PM Office 2	47.8%	46.3%	5.8%	0.1%	0.0%
Project Managers Office	28.6%	26.7%	44.8%	0.0%	0.0%

4

CASE STUDY

Heathrow – Safe Air System: Benefits

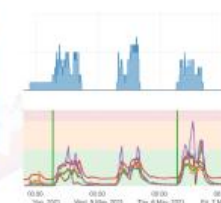
- Directly reducing the viral transmission risks
- In-room filtration removes COVID from the air, which reduces the viral transmission risk associated with elevated CO2 levels, as well as general air pollution. For small buildings (and ones without mechanical ventilation) this is done on a room-by-room basis.
- For large buildings, UVC and/or ionisation and advanced air-flow management to remove viruses, pollution and improve fresh-air delivery can be integrated directly into the ventilation (HVAC) infrastructure, and pay for itself over time with energy savings.



5

Heathrow – Safe Air System: Installation

- The installs are plug-and-play, quick and non-disruptive; requiring only 13 amp supply to all assets – designed for an unnoticeable retrofit.
- Targeted sensors and filters can be deployed in a single room or a multi-storey building, covering what you need: air quality, comfort, occupancy and more.
- The system will provide feedback to manage risk and ensure best practice by: helping to take immediate action in the room, helping to prioritise areas for improvement or automatically to a BMS (optional) to improve fresh air deliver.



6

Heathrow – Safe Air System: Before and After

- Filtration** directly improves the air quality by removing pollutants, (as seen by comparing Particulate Matter levels before and after filtration).
- Traffic light indicators** on the sensors inform and enable staff to open doors and windows to bring in fresh air and improve indoor air quality and reduce indoor CO₂ levels (as seen from ventilation test graph from our office with typical occupancy)

Particulate Matter levels

	Minimum	Average	Maximum		Minimum	Average	Maximum
All sensors	0 µg/m ³	3 µg/m ³	19 µg/m ³	All sensors	0 µg/m ³	0 µg/m ³	4 µg/m ³
Engineers Office,	0 µg/m ³	5 µg/m ³	17 µg/m ³	Engineers Office,	0 µg/m ³	0 µg/m ³	4 µg/m ³
Large PM 2	0 µg/m ³	3 µg/m ³	19 µg/m ³	Large PM 2	0 µg/m ³	0 µg/m ³	4 µg/m ³
PM Office 2	0 µg/m ³	2 µg/m ³	13 µg/m ³	PM Office 2	0 µg/m ³	0 µg/m ³	3 µg/m ³
Project Managers Office	0 µg/m ³	2 µg/m ³	15 µg/m ³	Project Managers Office	0 µg/m ³	0 µg/m ³	4 µg/m ³

CO₂ levels



7

Heathrow – Safe Air System: Before and After

Safe Air improvements	Before	After
Measurement	IAQ wasn't measured so we had no data other than how we felt.	With the air now being measured and the dashboard information available we now know what happens & can improve air quality by opening windows & doors.
CO ₂ levels	CO ₂ levels in unventilated rooms would regularly exceed guidelines (link), which: <ul style="list-style-type: none"> Increases viral transmission risk Reduces cognitive ability 	CO ₂ levels are now measured and as such the team are able to see when they are rising and look to open doors and windows to bring some fresh air into the space as it is currently unvented.
Awareness and Action	Increased awareness due to COVID, but no workplace metrics to act upon.	Detailed IAQ metrics now available. Awareness and essential training fulfilled.
Air Purification	None	The air in each office is now being cleaned with Clear displays indicating the quality of the air.
Behavioural Change	Decision making was made on personal preference rather than real IAQ metrics.	People are acting upon the information & alerts provided. Opening windows & doors, etc.
Wellness & Feel Good	With no air purification and measurement of CO ₂ and PM levels the area was not set up for promoting staff confidence in the space.	There has been a noticeable improvement in Air Quality with positive comments from staff and some hay-fever sufferers saying their symptoms are reduced in the office.

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