25-Point IAQ Building Performance Audit

Five Pillars. Twenty-Five Critical Checks. One Healthier Building.

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OCCUPANT ENVIRONMENT		
PILLAR 1	**Assessment Criteria**	
Is the indoor environment supporting health, comfort and productivity? The first priority is understanding the conditions experienced by occupants - not simply the performance of the HVAC system.	**Carbon Dioxide (CO_2)**	An indicator of ventilation effectiveness and occupancy levels. Elevated CO_2 can suggest inadequate fresh air and is associated with reduced cognitive performance.
	Particulate Matter ($PM_{2.5}$ & PM_{10})	Fine particles from outdoor pollution, dust, combustion and internal activities that can affect respiratory health and comfort.
	Volatile Organic Compounds (VOCs)	Emitted from furnishings, finishes, cleaning chemicals and office equipment. High concentrations may contribute to irritation, headaches and poor perceived air quality.
	Temperature & Relative Humidity	Assess thermal comfort and identify conditions that may encourage microbial growth or reduce occupant comfort. Maintaining appropriate humidity also supports overall IAQ.
	Occupant Experience	Review complaints relating to headaches, eye irritation, dry throat, fatigue, odours and perceived air quality. Occupant feedback often identifies problems before sensors do.

HVAC PERFORMANCE		
PILLAR 2	**Assessment Criteria**	
Is the building delivering the air quality it was designed to achieve? Even well-designed HVAC systems can underperform if not properly maintained or commissioned.	**Ventilation Performance**	Verify that outside air delivery aligns with the building's design intent and operational requirements.
	Filtration Effectiveness	Review filter type, condition, pressure drop and replacement schedules to ensure effective particulate removal without unnecessary energy penalties.
	Air Distribution	Assess airflow balance, diffuser performance and whether clean air is reaching occupied zones evenly.
	Maintenance Practices	Evaluate cleanliness of air handling units, coils, drain pans and ductwork together with preventative maintenance records.
	Control Systems	Review building management systems (BMS), sensor calibration, scheduling and demand-controlled ventilation strategies to ensure systems operate efficiently.

POLLUTANT SOURCES		
PILLAR 3	**Assessment Criteria**	
Where are contaminants entering - or being generated within the building? Effective IAQ management requires identifying pollutant sources before selecting solutions.	**Building Materials & Furnishings**	Identify potential emissions of formaldehyde and other VOCs from finishes, furniture and fit-outs.
	Cleaning & Maintenance Products	Review chemical use, storage practices and opportunities to reduce indoor pollutant generation.
	Moisture & Water Intrusion	Inspect for leaks, condensation and areas where dampness may encourage mould growth.
	Outdoor Air Quality	Assess nearby traffic, industrial emissions, construction activity, dust and seasonal events such as sandstorms that may influence ventilation strategies.
	Indoor Activities	Evaluate kitchens, printing rooms, workshops, laboratories and other processes that generate contaminants requiring local control.

BUILDING OPERATIONS		
PILLAR 4	**Assessment Criteria**	
Is the building operating as intended? Many IAQ issues arise not from design, but from day-to-day operation.	**Occupancy Patterns**	Compare actual occupancy with original design assumptions to identify changing ventilation needs.
	Operating Schedules	Review HVAC start-up, shutdown and setback strategies to ensure adequate ventilation during occupied periods.
	Space Utilisation	Identify changes in room use that may have altered contaminant loads or ventilation requirements.
	Maintenance Management	Assess inspection frequencies, filter replacement practices and documentation.
	Energy & IAQ Balance	Evaluate whether operational decisions are optimising both Indoor Air Quality and energy performance rather than sacrificing one for the other.

PERFORMANCE, COMPLIANCE & IMPROVEMENT OPPORTUNITIES		
PILLAR 5	**Assessment Criteria**	
Can the building perform better? The audit concludes by identifying practical opportunities for improvement.	**Indoor Air Quality Benchmarking**	Compare measured conditions with recognised guidance and project objectives.
	ASHRAE Alignment	Review opportunities to apply performance-based approaches, including ASHRAE Standard 62.1 IAQP where appropriate.
	Healthy Building Certification Readiness	Assess how the building aligns with frameworks such as WELL, LEED and Fitwel.
	Risk Assessment	Prioritise issues according to their impact on occupant health, operational performance and business continuity.
	Improvement Roadmap	Provide a phased action plan covering operational changes, maintenance improvements, ventilation optimisation, filtration upgrades, active air purification and ongoing monitoring.

KEY DELIVERABLES	
Current Building Health Score	An evidence-based assessment of the building's present IAQ performance.
Priority Action Plan	A practical, prioritised roadmap identifying immediate, medium-term and strategic improvements
Performance Dashboard	Key IAQ metrics and recommendations that can be tracked over time to demonstrate continuous improvement.