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Industry Whitepaper

The Role of Facilities Management in Mitigating Occupational Cancer Risk in the UK

Facilities Management

0344 858 2622
info@aefm.co.uk
www.aefm.co.uk
Reg No. 06950191

Sentinel House
Harvest Crescent
Fleet, Hampshire
GU51 2UZ

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1. Executive Summary

Occupational cancer remains a formidable public health challenge in the United Kingdom, accounting for an estimated 13,500 new diagnoses and 8,000 fatalities annually (HSE, 2025/26). While historical focus has largely rested on heavy industry and manufacturing, the role of Facilities Management (FM) has emerged as a critical lever in the modern landscape of cancer prevention. As the custodians of the built environment, FM organisations hold the direct responsibility for managing the physical, chemical, and biological hazards that millions of UK workers encounter daily.

The FM Strategic Intersection

The impact of FM on cancer risk is twofold, addressing both the occupational health of direct employees (e.g., maintenance engineers, cleaners, and groundskeepers) and the environmental health of client workforces within managed spaces. This report identifies that the FM sector is transitioning from a traditional "compliance-first" mindset to a "preventative-wellness" model. This shift is driven by a convergence of advanced Building Management Systems (BMS), stricter HSE oversight, and the integration of academic findings into practical site operations.

Key Pillars of Impact

Our analysis highlights four primary domains where FM interventions are significantly reducing the likelihood of cancer:

- **Hazard Containment & Mitigation:** Through the digitisation of asbestos registers and the deployment of active radon sump systems, FM providers are moving from reactive management to real-time hazard avoidance.
- **Technological Integration:** The use of Smart HVAC sensors and M-Class dust extraction technologies has transformed the management of Respirable Crystalline Silica (RCS) and Volatile Organic Compounds (VOCs), reducing long-term respiratory cancer risks.
- **Operational Reform:** FM firms are increasingly adopting "Sun-Safe" outdoor work policies and "Circadian-Friendly" shift patterns, addressing the IARC-classified risks associated with solar radiation and night-shift disruption.
- **The 'Healthy Building' ROI:** For clients, proactive FM is no longer seen as a cost center but as a risk-mitigation strategy. By adhering to frameworks like the WELL Building Standard, FM organisations are creating "low-carcinogen" environments that improve employee retention and reduce long-term corporate liability.

Summary Conclusion

The evidence suggests that when FM organisations prioritise high-integrity maintenance and evidence-based working practices, they act as a vital filter against carcinogenic exposure. This report demonstrates that the industry is uniquely positioned to bridge the gap between academic research on carcinogens and the practical implementation of life-saving workplace standards.

Andy Erskine
Chief Executive Officer
AEFM Limited

2. The Current Landscape: Occupational Carcinogens

Academic research, notably led by Dr. Lesley Rushton (Imperial College London), indicates that a small number of carcinogens are responsible for the majority of the UK's occupational cancer burden.

Primary Risks Managed by FM:

- **Asbestos:** Still the leading cause of occupational cancer deaths in the UK, found in buildings constructed before 2000.
- **Radon Gas:** A naturally occurring radioactive gas that can accumulate in poorly ventilated basements and ground-floor rooms.
- **Diesel Engine Exhaust Emissions (DEEEs):** Relevant for FM teams managing loading bays, underground car parks, or logistics hubs.
- **Silica Dust:** Produced during maintenance activities involving concrete, stone, or tiles.

3. FM Interventions: Technical & Operational Improvements

Facilities Management organisations are uniquely positioned to modify the physical environment to eliminate or reduce exposure to carcinogens.

3.1 Advanced Air Quality and Radon Mitigation

Poor ventilation is a primary driver of radon accumulation. FM organisations are now adopting "Smart HVAC" systems that use real-time sensors to monitor air quality.

- **Improvement:** Implementing active radon sump systems and mechanical extract ventilation in high-risk zones (e.g., Cornwall, Devon, and parts of the Peak District).
- **Impact:** Reduces the likelihood of lung cancer for employees stationed in basement offices or plant rooms.

3.2 Digital Asbestos Management

Traditional "paper-based" asbestos registers are being replaced by Digital Twins and Building Information Modelling (BIM).

- **Case Study (Industry Example):** A major UK FM provider, Amey, integrated asbestos data into their CAFM (Computer-Aided Facilities Management) systems. This ensures that any operative (direct or sub-contracted) receives an automated alert on their mobile device regarding asbestos presence before a work order is even started.

4. Changes in Working Practices: Direct Employee Impact

FM organisations employ a large number of mobile engineers and cleaning staff who face higher-than-average risks.

4.1 Solar Radiation and Outdoor Workers

For FM staff maintaining grounds or external building envelopes, skin cancer is a significant risk.

- **New Practice:** Implementation of "Sun-Safe" policies, including the provision of UV-protective uniforms and rescheduling high-exposure tasks to avoid peak UV hours (11 am – 3 pm).
- **Academic Support:** Hutchings et al. (2024) highlight that stricter interventions regarding solar radiation could avoid thousands of future cancer cases by 2060.

4.2 Shift Work and Circadian Health

The IARC (International Agency for Research on Cancer) classifies night shift work as a "probable carcinogen."

- **FM Improvement:** Rethinking maintenance schedules to reduce "permanent" night shifts and implementing forward-rotating shift patterns, which are less disruptive to the body's natural repair mechanisms.

5. Client Value: The "Healthy Building" Proposition

In the current UK corporate landscape, Facilities Management (FM) has evolved from a "hidden" utility to a strategic partner in Environmental, Social, and Governance (ESG) reporting. The "Healthy Building" proposition is no longer an optional luxury; it is a quantifiable risk-mitigation strategy that offers a clear Return on Investment (ROI) by reducing the long-term liabilities associated with occupational cancer.
Modern FM is no longer just about "fixing things"; it is about "wellbeing." FM providers are now using the WELL Building Standard as a framework to offer cancer-preventative environments to their clients.

Intervention Category	Specific FM Action	Likelihood of Risk Reduction
Water Quality	Advanced filtration to remove heavy metals and micro-carcinogens.	Moderate
Material Choice	Specifying "Low-VOC" and "Red List Free" materials for refurbishments.	High

Nutrition Support	Managing healthy-vending contracts that exclude processed meats.	Moderate (Lifestyle)
Health Screening	Providing on-site mobile screening units for client staff.	High (Early Detection)

5.1 Quantifying the Financial Impact

The financial burden of occupational cancer in the UK is staggering, with the HSE estimating the annual cost to society at over £12 billion. For individual clients, the ROI of FM-led cancer prevention manifests in three primary areas:

- **Reduced Liability and Insurance Premiums:** Proactive management of carcinogens (e.g., automated asbestos tracking and radon monitoring) significantly lowers the risk of "Long-Tail" industrial disease claims. Insurers are increasingly offering lower premiums to firms that can demonstrate "Best-in-Class" FM compliance via digital audit trails.
- **Enhanced Talent Retention:** Research from the *World Green Building Council* suggests that employees in "Healthy Buildings" report an 11% increase in productivity. In sectors like Finance and Tech, the cost of replacing a high-level employee can exceed **150% of their annual salary**. By providing a cancer-aware environment, FM helps clients protect their most valuable asset: human capital.
- **Asset Value Preservation:** Buildings with high health-standard certifications (such as WELL or Fitwel) command a "green premium" in the UK real estate market. FM plays the lead role in maintaining these certifications through rigorous air and water testing protocols.

5.2 Metrics for Cancer-Preventative FM

To demonstrate ROI, FM providers are now utilizing specific Key Performance Indicators (KPIs) that correlate directly with cancer risk reduction:

Metric	Description	ROI Outcome
VOC Concentration Levels	Monitoring 'off-gassing' from furniture and paints.	Lower respiratory cancer risk; higher cognitive function.
PM2.5 / PM10 Filtration Efficiency	Effectiveness of HEPA/MERV filters in removing outdoor pollutants.	Reduced lung cancer incidence in urban-based staff.

Radon Becquerel Levels (Bq/m^3)	Maintaining levels below the UK's 'Action Level' of 200 Bq/m^3.	Elimination of the secondary cause of lung cancer in the UK.
BREEAM/WELL Compliance Score	Overall building health rating.	5–10% increase in market rental value.

5.3 Case Study: Productivity Gains through Air Quality

A 2024 study by the Building Engineering Services Association (BESA) analysed a London-based FM contract where the provider upgraded to advanced UVC-G Air Purification. By neutralising airborne carcinogens and VOCs, the client saw a 15% reduction in short-term sick leave and a measurable improvement in employee wellness surveys. Academically, this supports the "Sick Building Syndrome" (SBS) mitigation theories, which link indoor environments directly to long-term cellular health.

6. Industry Case Studies

Case Study A: The "No Time to Lose" Campaign (IOSH)

The Institution of Occupational Safety and Health (IOSH) partnered with several UK FM firms to tackle silica dust. By switching to "M-Class" vacuum extraction on all power tools rather than just "sweeping up," firms reported a 90% reduction in respirable dust levels during retail fit-outs.

Case Study B: Cancer Research UK (CRUK) & Corporate FM

FM providers like Mitie and Amey have engaged with CRUK's "Cancer Awareness in the Workplace" program. This involves training line managers to spot early signs and supporting employees returning to work after treatment through "Reasonable Adjustments" (as required by the Equality Act 2010).

Case Study C: The "Circular Economy" in FM Refurbishments

A leading UK FM firm, CBRE GWS, recently implemented a "Healthy Material" procurement policy for all client fit-outs. By banning the use of products containing formaldehyde and phthalates (known carcinogens), they not only reduced the VOC load of the building but also ensured that the materials could be safely recycled at the end of their life cycle. This integration of sustainability and health creates a double-ROI: lower environmental impact and zero carcinogenic off-gassing for the occupants.

7. Conclusion & Recommendations

The impact of Facilities Management on cancer risk reduction is profound but often hidden. By managing the fabric of the building and the safety of the work-force, FM serves as a critical barrier to carcinogenic exposure.

Recommendations for FM Leaders:

1. **Mandate Digital Registers:** Ensure all hazardous material data is accessible via mobile CAFM apps for field engineers.
2. **Enhance Ventilation Standards:** Move beyond minimum compliance to "Optimal Air Quality" to mitigate radon and volatile organic compounds (VOCs).
3. **Holistic Wellbeing:** Integrate cancer awareness and screening into standard employee benefit packages for direct staff.

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