

# Significantly Improved Indoor Air Quality at Mount Vernon Hospital

**CleanLight is a powerful LED panel, proven to clean the air by destroying viruses and bacteria, including COVID-19 wherever it shines.**

Approved by eminent microbiologist Dr Carl Edwards and extensively tested in laboratories as well as real-world trials, CleanLight has been proven to eliminate the problem of bacteria, viruses, pollutants, and odours in the air across all indoor environments.



Our Air Quality Audit is a precise, scientifically verified process that accurately measures airborne pathogens and shows where the potential for onwards transmission of disease is greatest. Working with the Trust's Infection Control team and expanded testing regime for the installation was developed and approved.

Mount Vernon Hospital, operated by The Hillingdon Hospitals NHS Foundation Trust, plays a vital role in providing healthcare services to the local community across Buckinghamshire and Hertfordshire. The outbreak of the COVID-19 pandemic brought to light the significance of indoor air quality in healthcare settings, especially in preventing airborne infections.

However, the aging infrastructure of across the NHS and limited capital investment posed a significant challenge in installing complex ventilation systems. This case study explores how Mount Vernon Hospital successfully addressed this challenge by implementing CleanLight panels, an innovative air quality solution. We will examine the results achieved and the broader implications for optimising air quality in healthcare facilities through the use of CleanLight.

## The Challenge

Mount Vernon Hospital faced the challenge of maintaining optimal indoor air quality within its aging infrastructure while confronting limited capital investment for extensive upgrades. Following the pandemic, the need to mitigate airborne infections like COVID-19 have been brought sharply into focus. However, significant financial resources were not readily available, necessitating the exploration of cost-effective solutions.

## The Solution

Mount Vernon Hospital implemented CleanLight panels as a pioneering and cost-effective air quality enhancement solution specifically in their orthopaedic ward. These advanced air purification systems utilize TiO<sub>2</sub> to effectively neutralize harmful pathogens, such as viruses and bacteria, present in the air. During the implementation, the existing lighting in the ward was seamlessly replaced on a like-for-like basis, allowing for easy installation without requiring any significant enabling works.

The simplicity and flexibility of this approach ensured minimal disruption to the clinical staff, making CleanLight panels the ideal choice given the hospital's constrained budget and restrictive infrastructure.



**"The Trust were pleased to be able to engage with Lightico to facilitate the site testing of the CleanLight in one our Ward Areas on site. We are pleased with the results presented by Lightico. The findings clearly demonstrate the impact of CleanLight on reducing microbial contamination. CleanLight test findings show that it can create a more conducive environment for both our patients and dedicated staff"**

**Mark Williams,  
Head of Estates & Facilities Compliance**

**NHS**  
The Hillingdon Hospitals  
NHS Foundation Trust

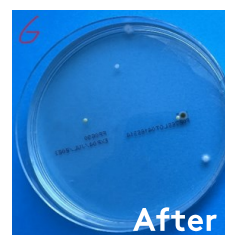
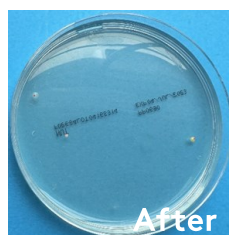
## The results

During the trial period, the implementation of CleanLight panels resulted in a remarkable 65% enhancement in air quality within Mount Vernon Hospital's orthopaedic ward. Moreover, the panels proved to be highly effective in reducing the maximum level of contamination recorded by an impressive 79%.

These significant improvements can be directly attributed to the advanced air purification capabilities of the CleanLight panels, which utilize TiO<sub>2</sub> to efficiently neutralize a wide array of harmful pathogens, including viruses and bacteria. The outcomes of the trial underscore the efficacy of this solution in tackling airborne infections and ensuring a safer and healthier environment for both patients and staff.

Plate location	Bacterial colony count (per plate) - CFU				
	Before Cleanlight		CleanLight –Installed		% Diff
	CFU	CFU/m <sup>3</sup>	CFU	CFU/m <sup>3</sup>	
Location 1 (rounded average)	23	244	7	74	-69.67%
Location 2 (rounded average)	16	165	9	94	-43.03%
Location 3 (rounded average)	23	241	6	60	-75.10%
<b>Rounded Average across the location</b>	<b>21</b>	<b>217</b>	<b>7</b>	<b>76</b>	<b>-64.98%</b>

<b>Max</b>	<b>66</b>	<b>700</b>	<b>14</b>	<b>149</b>	<b>-78.71%</b>
<b>Mean</b>	<b>21</b>	<b>217</b>	<b>7</b>	<b>76</b>	<b>-64.98%</b>
<b>Min</b>	<b>3</b>	<b>32</b>	<b>3</b>	<b>32</b>	<b>0.00%</b>



## The bigger picture

Mount Vernon Hospital's success in enhancing indoor air quality through the implementation of CleanLight panels offers valuable insights to other healthcare facilities globally. The case study demonstrates that innovative solutions like CleanLight™ panels can effectively improve air quality without the need for extensive and expensive infrastructure renovations. This emphasizes the importance of adopting advanced air purification technologies in healthcare settings to safeguard public health during pandemics and beyond.

As Mount Vernon Hospital, operated by Hillingdon Hospitals NHS Trust, continues its commitment to providing exceptional healthcare, the lessons learned from this case study can serve as a foundation for other hospitals to implement comprehensive air quality strategies. By prioritizing air quality management, healthcare facilities can contribute to a safer, healthier future for patients, staff, and the broader community.