

Installing energy efficient lighting and delivering clean air to a busy health centre

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.

AIR QUALITY AUDIT



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 NHS Scotland and the Ayrshire & Arran region Lightico identified Beith Health Centre as a prime candidate for an initial trial of CleanLight. This busy community health centre provides comprehensive NHS primary care services to help patients manage your health and well-being.

The challenge

This busy health centre is on the frontline of the NHS, providing a range of services to the local community resulting in a constant throughput of visitors being treated by a highly skilled care team. As the post-pandemic regime loosens the users of the site remain at risk from the airborne transmission of a range of pathogens. While COVID-19 remains present, it is now joined by increased influenza and the bacterial infection of Group A Strep & Scarlet Fever. **Therefore, the risk to staff and the potential loss of productivity within this heavily burdened organisation is significant.**

The general areas have limited provision for mechanical air handling other than the ability to open external windows and doors. While air movement is improved in the treatment rooms this enclosed (4m x 4m) space represents a higher risk of airborne transmission.

Samples taken in the general areas indicate levels of airborne bacteria above recognised permissible levels. Those seen in the treatment room were lower but the heightened risk **indicates that the current ventilation is sub-optimal.**

The solution

Following the completion of the Air Quality Audit, a lighting design was created that replaced the existing lighting configuration ensuring lighting levels were delivered in line with CIBSE guidelines. This provided consistent coverage of CleanLight panels that Lightico calculated to deliver the equivalent of 5.39 ACH (air changes per hour) in the general area and 8.53 in the treatment room. Through the simple replacement of the existing lighting, the CleanLight panels are now providing clean air without the need for the business to invest in installing and operating mechanical ventilation. **The reduced energy use from the lights also saves over £700 per year.**



“The trust already recognises the need to move toward the use of energy efficient lighting but to have the added benefit of providing clean air for staff and patients was never something we considered.

The installation of the lighting was quick and simple resulting in minimal disruption to the operations of the centre and the feedback we have had from the staff has been incredibly positive.”

Robert Calderwood—Estates Officer, NHS Scotland

The results

Following the installation of CleanLight the “after” stage of the Air Quality Audit was completed. From this, a significant improvement in air quality was identified when measuring bacteria counts. This not only reduces the potential risk of the transmission of airborne pathogens in the general areas where this is currently little or no ventilation being provided to these spaces. The results in the treatment room also demonstrate that through the use of CleanLight the existing ventilation is being supported and now delivers much better air quality without any further investment or disruption.

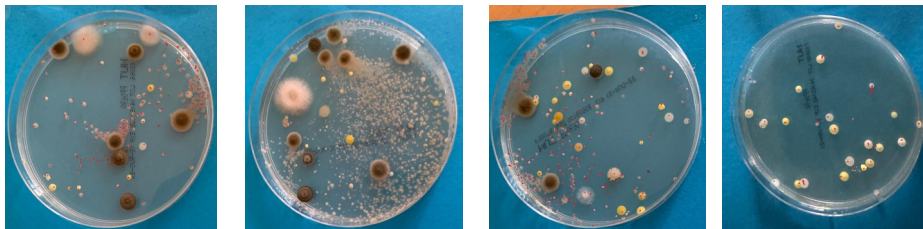
In addition to this, the Health Centre will see a reduction of over £700 on their energy bills through the use of more energy-efficient lighting.

Plate location	Bacterial colony count (per plate) - CFU				% Diff
	Before Cleanlight	Before Cleanlight	After Cleanlight	After Cleanlight	
	CFU	CFU/m ³	CFU	CFU/m ³	
Location 1	155	1645	12	127	92%
Location 2	300*	3183*	22	233	93%
Location 3	214	2271	7	74	97%
Location 4	30	318	1	11	94%
Site Average	175	1854	11	111	94%

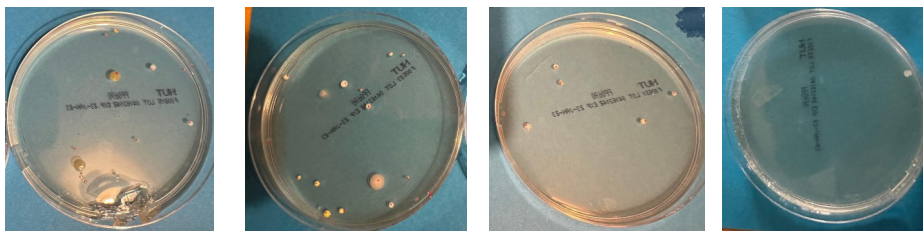
*Before sample 2 was uncountable, 300 has been used as a reference for the average but the true quantity was far in excess of this

According to the sanitary standards of the European Commission for non-industrial premises, the permissible limits of bacterial load is ≤ 500 CFU/m³. By reducing the level of CFU to 111CFU/m³ CleanLight has enabled the Health Centre to adhere to these standards.

Before Samples



After Samples



A site wide average reduction of 94% was achieved through the installation of CleanLight

The bigger picture

CleanLight from Lightico provides a solution where your staff’s work would be compromised, by adding protocol and extra processes to better protect them.

The starting point is always an accurate assessment—using our Air Quality Audit. Once the danger areas have been identified, our CleanLight LEDs can be fitted quickly and take immediate effect. By killing airborne bacteria, viruses, pollutants, and odours with nothing but light, CleanLight provides, non-intrusive, instant and highly effective protection.

Switch CleanLight on, and switch on a new level of protection, with almost no disruption and no increase to your energy bill.