

In times of heightened awareness surrounding HCAI's across the healthcare sector, it is essential that hospital venues be fitted with the correct professional solutions to provide piece of mind and protection to the people within this environment.

With the ever increasing threat of in-house infection, it is crucial that an answer be provided to combat this hazardous dilemma.

This was promptly recognised by the Royal Sunderland Hospital, which in turn was reflected throughout their project brief with superior healthcare standards at the forefront of every design consideration.



Project Brief

Extension of the Royal Sunderland Hospital to increase patient capacity from 970 to 1108.

A 138 bed ward extension to provide much needed supplementary care facilities for the hospital. This state of the art Integrated Critical Care Unit (ICCU) separates theatre staff and nursing staff to eradicate the chances of contamination spreading between the two sections.

The primary motive for this project brief is a new scheme being employed by the NHS Foundation Trust throughout the UK, Royal Sunderland Hospital being the first to recognise and develop the new initiative.

SmartGlass Medical specialize in this field where ordinary interior settings are transformed into modern, state of the art settings while at the same time offering a unique environment in which patient care and wellbeing is at the forefront.

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LC SmartGlass™ offers instant privacy at the flick of a switch. Offering patient dignity and privacy while allowing hospital staff to safely and efficiently review patient well being the SmartGlass screen offers a sheer easily cleaned surface to replace traditional blind systems which are difficult to clean and are high risk in terms of harboring dirt and bacteria. LC SmartGlass can be tailored to suit varying healthcare applications with requirements such as fire rated, x-ray proof and impact resistant glass.

All LC SmartGlass panels are bespoke manufactured using a lamination process which encapsulates a PDLC film between 2 or more glass sheets. Using a minute electrical current, users can immediately switch the LC SmartGlass from clear to private (opaque) and vice versa.

Principle

When the electrical supply is switched on, the liquid crystal molecules align and incident light passes through and the LC SmartGlass panel instantly clears. When the power is switched off the liquid crystal molecules are randomly oriented scattering light and the LC SmartGlass becomes opaque (private).

Royal Sunderland Hospital

The Integrated Critical Care Unit (ICCU) includes high-dependency single bed units, isolation single bed units and general post-operation single bed units. In such a delicate environment, extra care must be taken to protect those who are most vulnerable to infection, patients and healthcare personnel. For this reason, state of the art partitioning was required to live up to the health and safety requirements of these particular divisions within the ICCU.



Switched On



Switched Off

LC SmartGlass toughened panels were used to create a state of the art partitioning system along the corridors of the ICCU. The double doors entering each ward are fitted with LC SmartGlass toughened door panels allowing for patient privacy and dignity at the flick of a switch, while also permitting care staff to effectively monitor patient activity.