

flex7 Case Study:

Radiotherapy Units, Beacon Centre Musgrove Park Hospital



The Brief:

Provide a lighting control solution that's easy to install, strip out and replace, on a regular basis. The system should not require specialist commissioning.

Extremely harsh conditions inside units affect lifetime of every product installed, meaning replacement of control modules is unavoidable. Replacement has to be reduced from current turn around time of 2-3 weeks, to decrease overall downtime of units.

Products Used:

ZoneLite Lighting Control Module

flex7 Scene Setting Plate

flex7 Luminaire Leads

flex7 Single Socket Outlets

flex7 have helped to dramatically increase efficiency of radiotherapy units at Musgrove Park Hospital, Beacon Centre using their ZoneLite Lighting Control Modules.

The Hospital is one of many across the UK who have a specialist unit to treat cancer patients. High-energy x-rays, produced by a linear accelerator (Linac machine) are used to accurately target the site of a tumour. These machines are housed in highly restricted rooms with 2m thick walls, which are commonly known as Linac Bunkers.



The Hospital is managed by Vinci Facilities, who were looking for a solution to replace the complicated lighting control system in their 3 Linac Bunkers. The old system was hardwired, required specialist commissioning, and used technology that was over 10 years old. Due to the extremely harsh conditions the control system was exposed to, it had a limited working life. The control panel needed to be dismantled and sent back to the manufacturer every few months for refurbishment and reprogramming. This unavoidably took a room out of action for 2 to 3 weeks at a time, resulting in increased waiting times for patients to receive vital cancer treatment. The damaging environment inside the bunker is impossible to negate, so a way of reducing downtime was needed. Flex7 were able to offer a solution that dramatically decreased downtime from 2 to 3 weeks, to mere minutes.

The flex7 solution offers more functionality than the previous system, simple plug & play connection, controls operating at PELV, and no specialist commissioning. The control module can simply be unplugged and replaced in under 5 minutes, thus requiring little to no downtime for the bunker. Karl Marillier of Vinci Facilities was delighted with the outcome of the project, saying "It's such a simple system. User friendly. Easy to maintain."



How it works

The ZoneLite Module operates 4 separate lighting channels:

Circuit 1 - Luminaires in the corridor outside the bunker. These are controlled by a simple on/off switch.

Circuits 2 & 3 - Luminaires down either side of the bunker. Controlled by a simple on/off switch.

Circuit 4 - DALI dimmable luminaires controlled by a flex7 Scene Setting Plate.

Handheld Control - flex7 lighting control works in conjunction with the Linac Machine's integral control. This means the operator can control both the Linac and the lighting from their hand held remote control console should they wish to.

The original lighting control system offered rudimentary manual dimming via a retractive switch. The flex7 solution is far more user-friendly and caters for an individual user's preferences. The flex7 plug-in Scene Setting Plate is programmed with 4 bespoke light levels, agreed upon by members of the clinical team. They are then able to recall their preferred lighting level instantly, rather than scrolling up and down to find their ideal. The flexibility of the system still allows for manual control if required, or for new scene to be stored should requirements change.

