

Milton Keynes University Hospital (MKUH)

Solar and Roofing Infrastructure Upgrade



Client: Milton Keynes University Hospital

Value: £5.3 million

Contract Dates: Phased delivery (2021–2024)

Description:

The Milton Keynes University Hospital (MKUH) Solar and Roofing Infrastructure Upgrade was a £5.3 million project delivered over a 36-month phased programme from 2021 to 2024. Commissioned by the Milton Keynes University Hospital NHS Foundation Trust, the project aimed to enhance the hospital's energy efficiency and reduce its long-term carbon footprint. All works were carried out while the hospital remained fully operational, serving over 500,000 patient interactions annually across inpatient, outpatient, emergency, and administrative services.

Scope of Works:

- Installation of a new 7500m² Langley flat roofing system
- Upgrading tapered insulation across multiple aging hospital wings
- Fitting over 3,300 photovoltaic solar panels
- Integrated mechanical and electrical (M&E) upgrades across live hospital buildings

Key Challenges & Lessons Learned:

Live clinical environment: Construction zones were often adjacent to or above critical care departments and staff corridors, requiring meticulous planning to maintain safe access and uninterrupted services. A carefully phased delivery strategy was developed in collaboration with hospital departments, including out-of-hours work and temporary M&E systems to ensure continuity. Dust, noise, and vibration were controlled using acoustic barriers and sealed enclosures, while segregated work zones with controlled access points safeguarded patients and staff.

Stakeholder engagement: Weekly meetings with hospital managers and clinical leads, monthly stakeholder reviews, and daily briefings for facilities and security staff ensured alignment and responsiveness. Real-time updates were shared via signage and noticeboards, and permit-to-work systems were coordinated with hospital engineers for high-risk areas.

Programme Success:

The project was completed on time and within budget, with no critical service disruptions. The installation of over 3,300 solar panels has already generated measurable energy savings, with nearly £50,000 saved on energy bills to date. The upgraded roofing and insulation systems have significantly improved indoor climate conditions, enhancing comfort for patients and staff.

"Since the panels went live, we've saved nearly £50,000 on energy bills — a figure that will only grow as we complete the next phase. The new roofing has transformed previously outdated areas into more comfortable environments for patients and staff alike."