



CASE STUDY

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# Sustainable healthcare with renewable energy enhancement



**APPROVED CONTRACTOR:**

CWG Group



**CLIENT:**

Milton Keynes University Trust

## The purpose:

As part of a comprehensive sustainability mission, and to meet increasing demand on services at the 550-bed healthcare facility, MKUH began the latest phase in its CO<sub>2</sub> reduction strategy.

This involved upgrading the flat roofs over the original main hospital buildings to improve thermal performance by installing insulation and Photovoltaic Panels (PV), as well as adding edge protection, and creating access.

Due to the size of the flat roofs, works are currently being carried out in phases as part of a five year refurbishment plan (2021-2025).

Phase one encompassed eight roof areas totalling 5000m<sub>2</sub>, which, after an in-depth roof condition survey found that the roofs had major deterioration, posing a health and safety risk to occupants.



## 2000 PV panels installed for renewable energy generation

### Our solution:

CWG Group, our Approved Contractor, was appointed via the LHC Framework. The works involved the strip-up of the old, inverted roof system, and installation of a warm roof application using the TA-30 Flat Roofing System.

Multiple potential combustible details were identified across the roof areas; rectified using SA-20 Detailing System around upstands, skirtings, outlets, flues and rooflights.

Several failed rooflights were replaced with Langley's Para-Range modular rooflights, optimising thermal insulation whilst allowing diffused natural light inside without solar glare.

In coordination with the roof works, 2000 photovoltaic (PV) panels were designed, supplied and installed by our Langley Eco Solutions team. All works were undertaken whilst the hospital was open and a live site.

The Solar PV panels will help support the energy needed for the hospital to run whilst reducing CO<sub>2</sub> emissions. Each solar panelled roof were given estimations on savings, for instance, one roof was sized at 2,100m<sup>2</sup> in size and could save 32.4 tonnes of CO<sub>2</sub> emissions, the equivalent to 1,488 trees planted.





## The result:

Milton Keynes University Hospital demonstrates a benchmark in healthcare refurbishment. By utilising their flat roof estate to install a solar PV scheme, the Trust is supporting the future of both the local community and the environment by delivering renewable energy and a greener solution.

Refurbishment of the hospital estate also allows for the proficient care of the community, ensuring no operational theatres and other essential rooms are closed due to issues faced with aged and defected waterproofing.




“At the Trust we are undertaking a significant programme of work to replace and upgrade the flat roofing across the site, enabling us to improve the energy efficiency and performance of our estate. This includes enhancing our roofing insulation, increasing the energy that we produce on site and reducing our carbon emissions.

The service and work provided by Langley via their Approved Contractors CWG Group has been exemplary and completed to a high standard within the initial outlined timeline. Their five-year maintenance check scheme ensures that we have their ongoing support as we continue our journey to become a more environmentally-friendly and energy efficient organisation.”

Tony Marsh, Estates Services Manager at  
Milton Keynes University Hospital



**For more information get in touch with our specialists**

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