

REDUCE YOUR USE

National Orthopaedic Hospital Cappagh

The National Orthopaedic Hospital Cappagh (NOHC) has been prioritising energy efficiency and decarbonisation for several years and is committed to becoming a leader among public sector organisations in this area. Recently, the hospital has completed numerous energy-saving initiatives including a campus wide lighting upgrade, upgrades to the heating system, window and door replacements, and insulation projects, along with a major emphasis on behavioural change. The success of these projects is largely due to the hospital's partnership with the HSE Energy Bureau who have provided training, support and funding for this work.

The hospital used the Reduce Your Use (RYU) campaign as an opportunity to refocus and find creative ways to meet the challenge of reducing energy use by 10%. Although challenging, with much of the low-hanging fruit projects already completed, NOHC exceeded its RYU energy target.



12% energy savings

Incl. 16% reduction in natural gas (Oct. 2022 to Mar. 2023)



5 buildings



Refurbishment of the convent building to create a board room, offices, & Cappagh Kids Paediatric Outpatient Clinic

Other heating related measures

The following measures were implemented in some areas, taking into account hospital and health requirements:

- Turned off heating and utilities outside building operating hours.
- Set internal space heating temperature to 19°C, outside of Patient areas.
- Shut down heat in office buildings at least 1-2 hours before building close.
- Reduced electricity use at peak times (5 pm-7pm).

Paradoxically, heritage buildings (below) often have the greatest behavioural and operational energy saving opportunities, due to the limitations of using new technology etc.



Original building still in use today

Heating and control

Space and water heating (fuelled by natural gas) accounts for 71% of the hospital's energy use over Winter, so this was the main priority. Measures included:

- Large heating zones were sub-zoned into smaller zones, for better control. Control valves were installed and connected to the BMS and were set to only open at programmed times. The heat could then be closed off to the areas where heat was not required.
- Weather compensation system settings were optimised.
- Ongoing close monitoring of the heating system time schedules to ensure that the optimal temperatures were being achieved while minimising over-heating.
- New procedure implemented by night security team from late evening to early morning, to close specific internal doors in order to contain heat within patient areas.



Surgical facilities are significant consumers of energy

Facilities assessment and staff engagement

- Site audits were conducted periodically by the security team and results fed back to the green committee for actioning.
- Hospital-wide "Energy Champions" promote responsible energy usage and identify improvements.



Future actions

Further efforts to improve energy efficiency and reduce carbon emissions will be boosted by the installation of natural gas, electricity and water sub-meters in key areas around the campus. This is underway and will help to inform the next step in the hospital's energy conservation journey.



Rialtas na hÉireann
Government of Ireland



OPW

Optimising Power @ Work