

Case Study - Cromcastle Court

upgraded using Ireland's
first local authority
Managed Energy Services
Agreement (MESA)

€83,470
average heating and
maintenance savings per
year over next 10 years

Energy savings and increased comfort levels

Location:	Cromcastle Court, Kilmore, Dublin 5
Upgrade:	Double glazed uPVC frame windows New plantroom equipment Air-to-water heat pumps Heating controls with remote access
Results:	Predicted average savings of €83,470 per year over next 10 years
Funding:	SEAI, Dublin City Council
Year completed:	2015

Project background

Cromcastle Court is located just off Kilmore Road in Coolock, Dublin 5. It consists of eight four-storey blocks predominantly grouped around three square parking lots. The blocks house a total of 128 apartments. Prior to the upgrade, the buildings had a communal heating system which did not allow the residents any control over the heating in their individual apartments. The buildings' boilers were coming to the end of their life and the existing windows were not energy-efficient.

Project description

Due to the high annual cost of supplying heat and hot water to the eight blocks, DCC's Housing Department decided to use a Managed Energy Services Agreement (MESA) instead of carrying out the upgrades using a traditional contract and procedure.

A MESA commits an Energy Service Company (ESCO) to install, finance, operate, and maintain energy saving measures in a building over an agreed period of time. Under this agreement, the ESCo pays the building's energy bills, in exchange for a series of payments based on the building's historic energy use.

"All of the flats are now full of young families so it's great that we are able to get these upgrades done."

Gary Lester, Cromcastle Court Residents Committee

The 7.5-year contact for Cromcastle Court's energy upgrades and maintenance was awarded to AC Heating.

AC Heating supplied and fitted the new plant equipment. Prior to the upgrade, each of the eight apartment blocks contained a boiler room with three 75kW gas boilers for space heating and hot water. These were replaced with an energy-efficient air-to-water heating system and two Toshiba 28kW split heat pumps were installed in each boiler room. The heating system was adapted to include a remote access and control system, which makes it possible for Dublin City Council to log in to the heating system to check or change the temperature in each building. The existing domestic hot water tanks were replaced with new fast-recovery tanks.

AC Heating is contracted to maintain all of the new equipment for a period of 7.5 years, after which the equipment will become the property of DCC.

Separately, DCC replaced the blocks' existing windows with highly-efficient double glazed uPVC-framed windows with a U-Value of 1.4 W/m²K.

Results

The upgrade of the buildings' fabric, plantroom equipment and heating controls through the use of Ireland's first local authority Managed Energy Services Agreement is expected to result in total heating and maintenance cost savings of €834,702 over the course of ten years. This means average energy and maintenance savings of €83,470 per year.

The upgrade also resulted in increased comfort and satisfaction levels for the tenants of the complex.

Energy Savings: €83,470 average savings on heating and maintenance per year over next 10 years
Predicted total savings of €834,700 over next 10 years

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