

Case Study

The Mirador on Western takes community heating to the next level



A stunning new development of 23 apartments in a popular part of west London is demonstrating how heat pumps can be used for community heating in a five-storey, art deco-styled block built to the highest standards.

This pioneering project is the first in the UK to use Ecodan Hydrodan water to water heat pumps linked to a low temperature heat network.



The Mirador on Western is just five minutes' walk from Acton Mainline station which includes both overground and the Elizabeth Line, making it highly desirable for commuters. At ground level below the 23 apartments are two flexible commercial spaces.

“When we were conceiving the project, we realised that there were two very important things we needed to address. One was sustainability and the other was indoor air quality,” explains Agha Abbas, Projects Manager for Casa Global Investments, the company behind the scheme.

To address the air quality, each apartment is equipped with Mechanical Ventilation with Heat Recovery (MVHR) which brings in filtered fresh air without wasting any energy.

On the sustainability front, heat pumps were chosen so that there was no need for gas on site and there are solar panels installed on the roof, which helps keep energy efficiencies high.

“In line with our sustainability aims, most of our apartments have a winter garden and on top of that, all our appliances are very energy efficient,” adds Agha Abbas.

But it's the building's use of a low-temperature heat network that really helps set it apart and the use of the innovative Ecodan Hydrodan heat pump, which delivers hot water and heating to each apartment.



WB Shields are the M&E Consultants for the project and Director Evan Shields explains: **“We’re using the Mitsubishi Electric system because it fits with the ethos of the whole building, which is all about sustainability, energy consumption and being green”.**

Each apartment has a Hydrodan unit which is specifically designed to connect to low temperature heat networks.



“Hydrodan includes a water cylinder and an internal heat pump, which upgrades the water temperature from the heat network to supply all the heating and hot water each apartment needs, explains Rafiul Islam, Product Specialist at Mitsubishi Electric.

The heat network to the apartment block is supplied by three Ecodan CAHV air to air heat pumps in a specially built plant space at the rear of the property and this means that the entire heating and hot water system is completely electric. Each CAHV unit is capable of 40kW of heating capacity and multiple units can be cascaded together to reach higher capacities as well, meaning it can be applicable to a wide range of applications.

The form of the Mirador on Western echoes the Art Deco buildings which have historically lined the western gateways to London. The external cladding provides a distinctive character with the introduction of a simple dual material palette consisting of pale buff brick and a pale glazed brick. The apartments also feature large terraces and balconies, with beautiful, elevated views of London.

“The stylish finish of each apartments demonstrates the investment that has gone into the building,” explains Evan Shields, “it was therefore really important that the project followed that principle with the building services which is why we picked a future-proof technology for the heating system.



Installation Summary



- 23 x Ecodan Hydrodan water to water heat pump



R32

- 3 x Ecodan CAHV air to air heat pumps



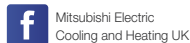
R454C

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Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). *These GWP values are based on IPCC 6th edition.

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