



**RENEWABLE  
SOLUTION PROVIDED**  
Cost-efficient system  
upgrade with  
minimal disruption to  
business

## Belfast business finds green retrofit high efficiency solution to saving money

Heyn Handling Solutions, based in Belfast's harbour area, had an air conditioning system that was nearing the end of its useful operating life.

The company had been very happy with the performance of its Mitsubishi Electric system, installed in 1992, but it was aware that the time and costs involved in maintaining it would soon increase.

With the introduction of tough new legislation to reduce CO<sub>2</sub> emissions, the phase out of R22 refrigerant and the maintenance issue, an update of the system was essential.





Heyn's reception area offers a comfortable welcome to visitors.

Although Heyn knew it would gain significant benefits from replacing its aging system, closing its offices was simply not possible, but the company was concerned about the disruption to business whilst work was carried out - and any costs that this might incur.

In order to minimise these concerns and find the best way to proceed, Heyn called in, Northern Ireland-based renewable energy specialists, Air Cool Engineering (NI) Ltd to advise.

Having looked at the current system and discussed Heyn's future cooling and heating requirements, Air Cool suggested a simple, cost-efficient but effective upgrade using Mitsubishi Electric's Replace technology.

"Using Replace we could utilise a lot of the existing infrastructure to update the current system and install additional units in areas not currently being served," explained Martin Mullan, Managing Director of Air Cool Engineering.

"This reduces both costs and installation time, and minimises any disruption caused whilst work is carried out. Needless to say, Heyn was delighted with this solution."

Having put together a plan of action, Air Cool started work on removing the old units. Mild weather meant that no additional heating was required and work progressed swiftly. In a short space of time all the unwanted kit had been removed from the building.

Utilising the existing R22 pipework, control wiring, drains and electrics Air Cool then replaced the old indoor units with the sophisticated City Multi R2 Series, including a new branch controller and condensing unit.



Telephone: 01707 282880

email: [airconditioning@meuk.mee.com](mailto:airconditioning@meuk.mee.com) web: [www.airconditioning.mitsubishielectric.co.uk](http://www.airconditioning.mitsubishielectric.co.uk)

UNITED KINGDOM Mitsubishi Electric Europe Living Environmental Systems Division  
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland  
Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

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**City Multi is a zoning system that takes advantage of inverter technology by varying the speed of the compressor to match the load requirements in each space.**

The City Multi's heat interchange circuit has been enhanced with the addition of an inverter driven fan motor and a heat exchanger design which uses a new *N Groove System* to improve both the system's efficiency and its COPs (Co-efficient of Performance).

Heyn Handling's previous system was capable of a COP of 1.74, but this rose to 4.27 with the installation of the new technology. This translates into an annual 55% rise in energy saving efficiency which means lower energy consumption, lower running costs and lower carbon emissions for the company.

The R2 series provides simultaneous heating and cooling using Mitsubishi Electric's 2 pipe heat recovery technology, rather than the conventional 3 pipe that is usually required, thereby helping to keep installation costs down.

The Replace technology can be used with both the City Multi and Mr Slim ranges of air conditioning systems and offers an ideal solution for almost all applications.

Replace cleans the existing pipework during commissioning to remove the build-up of any deposits and R22 mineral oil. This eliminates the need for new pipework which helps to reduce costs and also avoids the need for any disruption or redecoration associated with the installation of new pipework.

Using the company's professional expertise and 20-year experience in the industry, Air Cool identified a number of opportunities that would ensure Heyn Handling got the best out of the replacement and upgrade.



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The ability to use existing pipework saves on installation time and costs

## Installation Summary

City Multi R2

PLFY-P-VCM-E2

Increase in COP from 1.74 to 4.27

55% increase in energy efficiency

Reduction in carbon emissions

Two-way blow cassettes were changed to four-way blow and extra cassettes installed in areas not previously served with heating and cooling.

The new City Multi R2 is ideal for simultaneous heating and cooling and the system's enhanced performance now provides Heyn Handling with an energy-efficient, cost-effective solution for all areas of their building, including the reception area and meeting rooms.

"One of Heyn's principal concerns was to achieve the upgrade with minimum interruption to its very busy office, but using the Replace technology we were able to complete the upgrade and replacement, along with the installation of additional units, in just three weeks," said Mr Mullan.

Air Cool Engineering (NI) Ltd specialises in the design, installation and maintenance of air conditioning, heating and ventilation systems for all business sectors, public and private, and offers its clients a five-year warranty on new Mitsubishi Electric installs. For further details visit

[www.aircoolengineering.co.uk](http://www.aircoolengineering.co.uk) or telephone 028 777 67114.

Mitsubishi Electric has devised a campaign to ensure that users of R22 air conditioning are aware of the R22 phase-out and its potential impact. It offers a free energy audit for customers using R22 systems – regardless of the make or brand of air conditioning being used.

For further information on the complete Replace range, or to obtain an energy audit of your existing air conditioning visit [www.thecaseforreplace.co.uk](http://www.thecaseforreplace.co.uk)



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