Fresh Air Ventilation

Case Study

De Montfort University Leicester

Making a World of Difference

University offers students optimum environment for working

De Montfort University is proud of its state-of-the-art facilities and the supportive environment it offers to students. In order to provide the best possible conditions for study the University has installed premium ventilation and air conditioning to some of the rooms within one of its properties, Edith Murphy House.

The provision of good ventilation and air conditioning offers a healthier and more comfortable environment in which to live and work. It also improves people's ability to concentrate.

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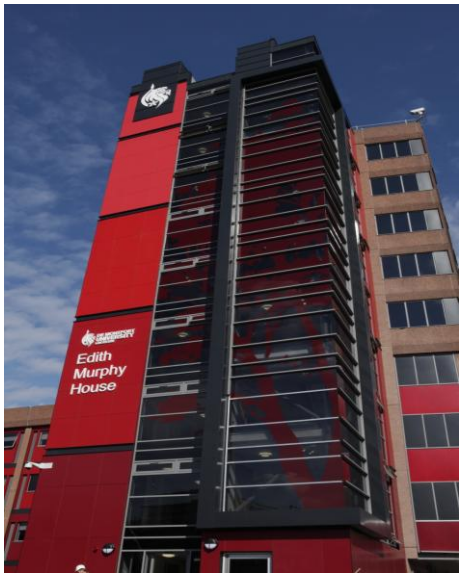

The decision to install a Lossnay system has provided the University with the perfect answer to provide rooms with excellent ventilation, with the added advantage of low running costs.

Engineering and development consultancy, Mott MacDonald, was tasked by the University to design a system that would provide it with the optimum solution for Edith Murphy House.

“With the introduction of stricter building regulations, modern buildings are becoming more air tight which makes the need for fresh air ventilation key to maintaining a healthy and comfortable internal environment,” said Stuart Bellamy, Principal Electrical Engineer at Mott MacDonald. “Basic ventilation systems allow all the energy spent in heating or cooling an interior to be lost as soon as fresh air is introduced to a room, however, mechanical heat recovery ventilation units such as Lossnay provide an ideal way to extract stale pollutant air and introduce fresh, clean air without compromising on internal temperature and humidity.

The Lossnay technology has been refined over a period of more than 30 years and has perfected the recovery of otherwise wasted energy. The system extracts stale air from an interior space and recovers up to 70% of the heating or cooling energy from it. This energy is then used to warm or cool the incoming fresh air, thereby keeping running costs down. In fact, the system is capable of saving up to 30% on the initial capital costs of some heating and cooling plant.

The secret of the effectiveness of the Lossnay system lies in the construction of its core which allows the exchange of both latent heat (humidity/moisture) and sensible heat (temperature). Made of ultra-thin, specially processed, paper constructed in a corrugated form and layered in alternate directions, the core completely separates the incoming and outgoing air supplies in order to ensure that only fresh air is introduced to an interior space.

When the inlet and exhaust air supplies cross in the Lossnay element, the superior heat-transfer and moisture permeability of the special paper allows a highly efficient, total heat exchange to occur, whilst acting as a barrier against air leakage.

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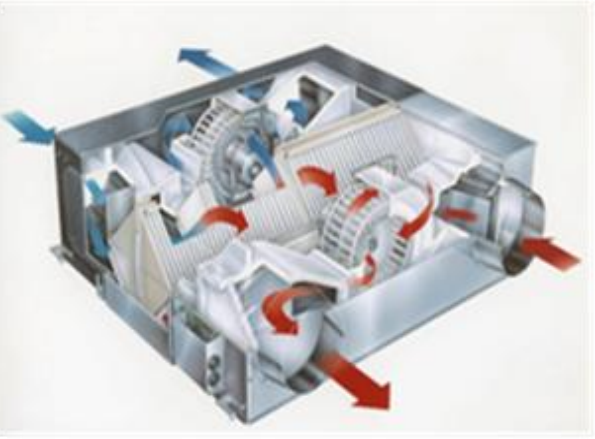

Installation Summary

De Montfort University has state-of-the-art facilities to improve student learning

Lossnay provides university with fresh air ventilation

Mechanical Ventilation with Heat Recovery reduces overall running costs

The Lossnay core also provides outstanding soundproofing properties making it ideal for use in soundproof rooms and other applications where noise may be an issue.

Mr Bellamy added: “The decision to install a Lossnay system has provided the University with the perfect answer to provide rooms with excellent ventilation, with the added advantage of low running costs.”

Mitsubishi Electric has produced a CD which leads users through the calculation software screen-by-screen and provides examples of how Lossnay can make a difference to a building’s energy use. Indoor and outdoor conditions can be altered, along with anticipated usage of the system, with the software automatically calculating the energy recovered in both heating and cooling modes.

For further information on Mott MacDonald visit www.mottmac.com or call 0113 394 6700.

For further information on Mitsubishi Electric’s Lossnay range or to obtain a copy of the CD visit http://airconditioning.mitsubishielectric.co.uk or call 01707 282880.

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Changes for the Better

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