CASE **STUDY**

CLIENT:
Imperial College London/ABS Consulting

BUILDING:
Teaching/laboratory/research facilities, London

ENVIRONMENT:
Urban City Centre Location

LOW ENERGY AIR FILTERS

FILTER TRIAL RESULTS IMPROVE AIR QUALITY, REDUCE WASTE, ENERGY CONSUMPTION AND CO2 EMISSIONS FOR IMPERIAL COLLEGE LONDON – DELIVERING SAVINGS OF OVER £50,000.

PROJECT PROFILE

An air filter trial was recently carried out for Imperial College, London by ABS consulting and Camfil. The Filter Trial project was carried out on Air Handling Units (AHUs) in the Sir Alexander Fleming & Biochemistry buildings at the London Campus. The results demonstrated substantial scope for energy saving of some 293 tonnes CO_2 per annum.

Imperial College London is a science-based institution with a reputation for excellence in teaching and research and consistently rated amongst the world's best universities. The project was part of the University's CONCOM programme. CONCOM is Imperial College's programme for continuous optimisation of plant and services, a programme which cuts costs, cuts waste and improves efficiency within the building environments at the university campus.

A major area of focus for Imperial College on the CONCOM programme is the consumption associated with the movement of air. Air Handling Units (AHUs) main function is to heat, cool and clean the air serving the different areas of the campus. Air passes through a damper or grille, across the heating and cooling coils and then crucially through the air filters before being delivered into the laboratory environment. The university's building managers work closely with building users, health & safety departments and maintenance teams to deliver the programme which contributes to the College's target to reduce its carbon footprint by 20% in 2014.

The project scope was to set up trials for replacing existing filters with energy efficient air filters in several Air Handling Units (AHU's) across the campus. Existing filters were replaced with Camfil's energy efficient filters, with a higher surface area and the filter positioning arrangement was changed. The trials were a success and realised a 7% savings. ABS Consulting and Imperial College are now rolling out this process across the campus, expecting savings of about £50,000 a year or about 250 tonnes of CO_2.

OUR SPECIALIST WORK FOR THIS CLIENT...

- Successful delivery and management of trial installations
- Initial justification via site inspection and Life Cycle Cost programme and fitting Camfil low energy air filters across the campus.
- Trial conducted on specified units
- No disruption to College and critical rooms
- Reduced cost, changes, energy and carbon

DELIVERING BENEFITS INCLUDING...

- Improved air quality
- Using Camfil Low Energy Air Filters reduced energy consumption but also enhances the filters' service life, reducing waste disposal
- Reduced energy consumption and CO_2 emissions
- Significant cost savings

THE CLIENT VIEW

Dimitra Diamantopoulas – Director, ABS Consulting

"We tried replacing existing filters with energy efficient filters, with a higher service area and we also changed the filter positioning arrangement.

The trials were a success, and we proved about 7% savings. Now we are rolling out this process across the campus and we expect savings of about £50,000 a year or about 250 tonnes of CO_2."