

## Southampton University



Project:	Southampton University
Sector:	Industrial
Client:	Southampton University
Contractor:	Bovis
Value (approx.):	£1.342 Million
Completion Date:	<p>The new building houses the School of Electronics and Computer Science (ECS) and the Optoelectronics Research Centre (ORC). An inter-disciplinary facility, Mountbatten is designed to meet the long term research needs of the university which is already known for its world-class laser research and development on silicon wafers.</p> <p>The new facility is equipped for work in bio-electronics, nano technology, lasers and silicon fabrication. Research and engineering at the sub-atomic level demands clean rooms with exceptional air purity and environmental control. Enclosed workstations, known as 'tools', for the sub-atomic research and engineering are located within the clean rooms.</p> <p>Within a contract worth over £1.5 million, Hargreaves was responsible for the major air supply and extract ductwork systems. This included make-up air systems fabricated to DW144, thermal extract and stainless solvent extract ductwork from the 'tools' within the clean rooms and general fresh air and exhaust ventilation ductwork for laboratories, seminar rooms offices and toilets.</p> <p>The clean rooms are suspended between the structural floors with accessible service voids above and below. Air is drawn through grilles in the clean room floor into the floor void and rises through a room wall cavity. Here it is mixed with pre-filtered and tempered air from the make-up air system before being drawn through cooling coils into the sealed ceiling voids. It is then introduced into the clean rooms via ceiling mounted fan assisted Hepa filters. All extract from the clean rooms is through the 'tools'. Control systems monitor temperature, pressure and humidity to keep these factors constant. Pascals for a period of one hour. HVAC ductwork construction is in fully flanged and heavy gauge galvanised and stainless steel. Extreme care was taken to preserve the</p>

	<p>hygienic integrity of the input air ductwork during the installation process.</p> <p>Bovis Lend Lease acted as the principal contractor for the project and installed the make up air units. Environmental and process ventilation system design was via the Glasgow office of consulting engineers CH2M Hill who were also the overall design consultants on the project. The clean room was built by CH2M Hill IDC Clean Rooms. Other contractors supplied the lined stainless steel ductwork for the acid and dust extract from localised processes in the building sourcing this from a manufacturer in the USA.</p> <p>The new Mountbatten Building is expected to be handed over in July for the University schools to commence tool installation. The ECS and ORC are not unique projects; Hargreaves has vast experience of ventilation services for research and technology production. In addition to services for major silicon wafer producers, the company has handled ventilation ductwork for research facilities at Imperial College, AstraZeneca, The Wellcome Foundation and other leading pharmaceutical and process engineering laboratories.</p>
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