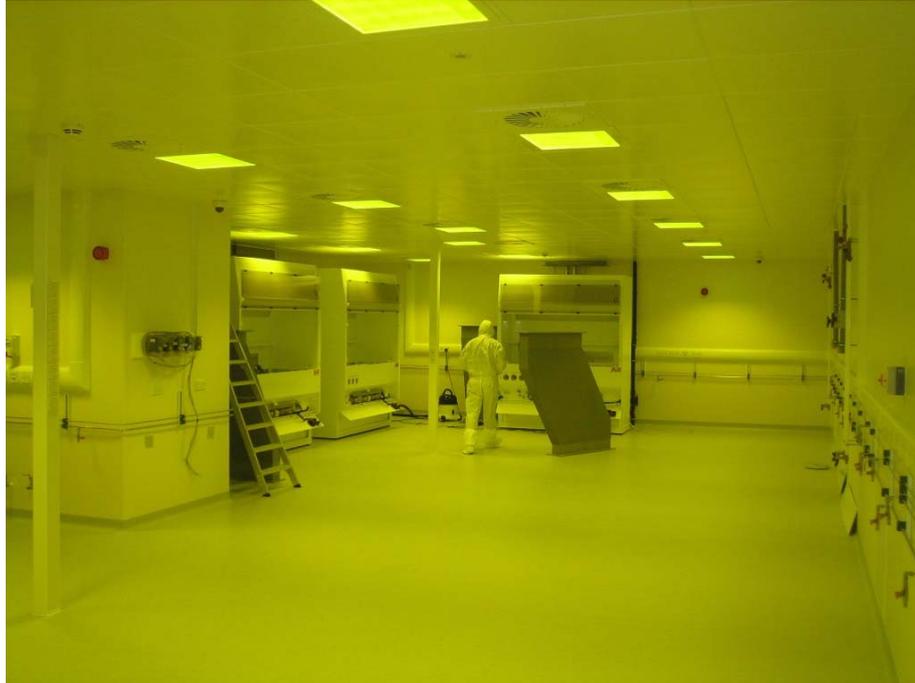


## Project Profile

<b>Project Description:</b>	<b>Organic Semiconductor Cleanroom</b>
Location:	School of Physics & Astronomy
Client:	University of St Andrews
Project Value:	£1.2m
Project Duration:	September 2012 – June 2015
Sector:	Education



Callidus Design Limited was appointed by the University of St Andrews to carry out the design of all services related to the construction of a new Cleanroom which will be used for research into Organic Semiconductors at the School of Physics & Astronomy in the North Haugh campus, St Andrews. The cleanroom is required to achieve a cleanliness classification of ISO 7 (or Class 10K to Fed Std 209D).

Having considered in detail several other possible locations for the new cleanroom on site, the decision was taken to locate the new building to the east of the School of Physics & Astronomy. The cleanroom is designed on the finger aisle principle to increase the linear length of wall available to locate equipment and to be able to service the equipment from the relatively “dirty” service areas. Where possible, the services were extended from existing infrastructure in the main building but where this was not feasible, new services were provided local to the cleanroom.

The project has included the formation of a new external plant compound to accommodate the new air handling plant, humidification plant and air cooled chiller.

Callidus Design was responsible for the design of the following services provided to the Cleanroom:

- Fresh Air and Recirculation Ventilation to maintain the cleanliness conditions and make-up for the air lost as a result of Pressurisation and Process Extract (incorporating Room Pressure Control, Humidification and Dehumidification functions)

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- Process Extract system serving wet decks and vacuum pumps
- Chilled Water system serving AHU plant and Process Cooling Water System
- LTHW System serving the Air Handling Unit Frost and Heating coils
- Process Cooling Water System (Cooling system to operate at a temperature above the room dewpoint temperature)
- Process Drainage System
- Domestic Hot & Cold Water Supplies
- De-Ionised Water supply
- Specialist Gases System (6no. gases)
- Specialist Gas Leakage Detection
- Building Management System BMS
- Small Power
- Lighting
- Data
- Fire Alarm
- Security & Access Control
- CCTV monitoring
- Lightning Protection