
Genzyme LEED Gold Certified Building

Building Energy Management System



“This was the first new Construction LEED certified building in Ireland, achieving LEED Gold with top marks in both Innovation & Design and Water Efficiency...”

Multinational biotech firm Genzyme developed a new office, administration and laboratory building at its Biopharma fill-finish facility in Waterford, Ireland. The development achieved a LEED Gold sustainability rating.

The scope of this project included the development of a four storey energy efficient 4,900sqm office block, a 1,800sqm extension to the QC laboratory and the refurbishment of existing office areas. PM Group was the overall project manager for this expansion. **SIRUS was responsible for the BMS controls for the project.**

Key Performance Indicators:

- 35% less energy usage
- 80% less water usage
- 95% Construction Waste diverted from Landfill

The building envelope was designed in compliance with the enhanced requirements of ASHRAE 90.1 2004. Extensive dynamic thermal simulation was undertaken to ensure reductions in the buildings primary energy demand. Regional and recycled material were utilised throughout and all construction wood and permanent joinery was sourced from sustainably managed forests. GGBS (Ground Granulated Blast Slag) was used to replace a significant percentage of Portland cement resulting in a further reduction of CO2 emissions.

Building Energy Solutions

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www.sirusinternational.com

CLIENT

Genzyme Ireland Ltd.
Pharmaceutical Plant

LOCATION

IDA Industrial Park, Waterford -
Ireland

SERVICES PROVIDED

FDA Validated HVAC and BEMS;
Design & Installation; LEED
Certificated BEMS; Training;
Total Data Points: approx. 2,200

DURATION

2003-2004

REFERENCE CONTACT

Mr Dermot Mackle Automation
Engineer -Projects
Tel: + 353 (0) 51 594100

PARTNERS

PM Group; Suir Electrical;
CG Services.

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The HVAC system consisted of a Primary AHU serving the office space with a mixing box, heating/cooling coil and a thermal wheel heat exchanger. Each floor of the 4 storey building can be isolated resulting in the AHU being set-back to maintain the optimum volume flow rates as required by the occupancy level. Each office has a local active and passive chilled beam which is controlled via a room temperature sensor and the control is shut down if the space is not occupied (as sensed by the room PIR). The primary air system uses enthalpy control, resulting in additional energy savings.

The BMS monitors the fan motor current through the VSDs in line with LEED requirements. The system also utilises optimiser control to delay the start times of the AHU if sufficient thermal energy is in the building to meet the specified environmental conditions prior to start-up.

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