IEA EBC Annex 62 Ventilative Cooling





IE_Dublin_Eircom Headquarters

Image 01: Northeast view © ARUP



Image 03: Interior view © ARUP







Building Specifications

Address	1, Heuston South Quarter, St. Johns Road, Ushers, Dublin 8, Ireland
Building Category	Office (20,000m ² with 7 floors)
Year of Construction	2009
Special Qualities	n/a
Location	53° Northern latitude, 6° Eastern longitude. Located in the city surrounded by buildings of similar size
Climate	Cfb (warm temperate climate, moist with adequate precipitation in all months and no dry season, warm summer)

Vent. Cooling Site Design Elements (Solar Site Design and Wind Exposure Design, Evaporative Effects from Plants or Water)

Buildings to the west of the building sheltering it from the sun and wind. The river Liffey is located 100 meters to the north, which can contribute to cooler air in the area.

Vent. Cooling Architectural Design Elements (Form, Morphology, Envelope, Construction & Material)

7 floors with 9 floors at the North-East corner, a central glazed atrium and basement car park. Exposed concrete soffits act as a thermal sink and reflect light across their surface.

Vent. Cooling Technical Components (Airflow Guiding Components, Airflow Enhancing Components, Passive Cooling Components)

Systems are fully integrated to allow operation without requiring full air conditioning. Cooling pipes were cast into the concrete structure to cool areas with large solar gains. Natural ventilation scheme assisted by low energy mechanical ventilation.

Building Energy Systems (Heating, Ventilation, Cooling, Electricity)

A 50% reduction in CO₂ emissions compared to Eircom's original 16 offices in Dublin city centre, was achieved.

Actuators, Sensors and Control Strategies

High level opening windows allows natural ventilation to be utilised.

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Building Ownership and Building Facility Management Structures

Owned and operated by Eircom. Architect: Reddy Architecture

Acknowledgements

n/a

Datasheet Source:

ARUP Engineers, Cork Institute of Technology

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