

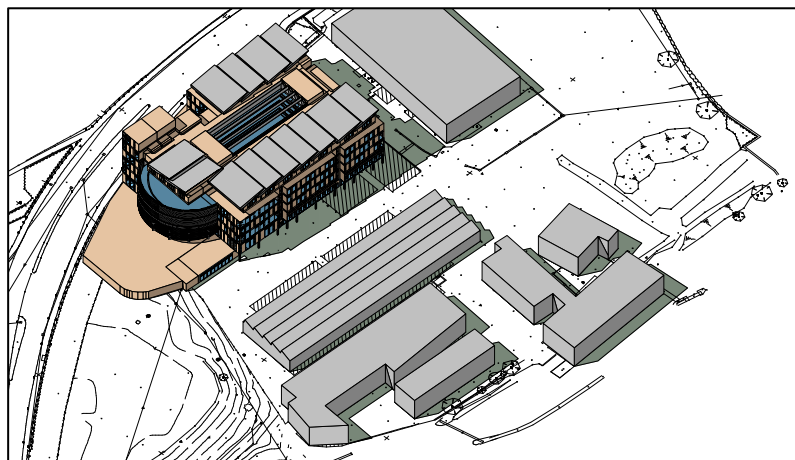
Fitzwilliam Court Balmoral Navan



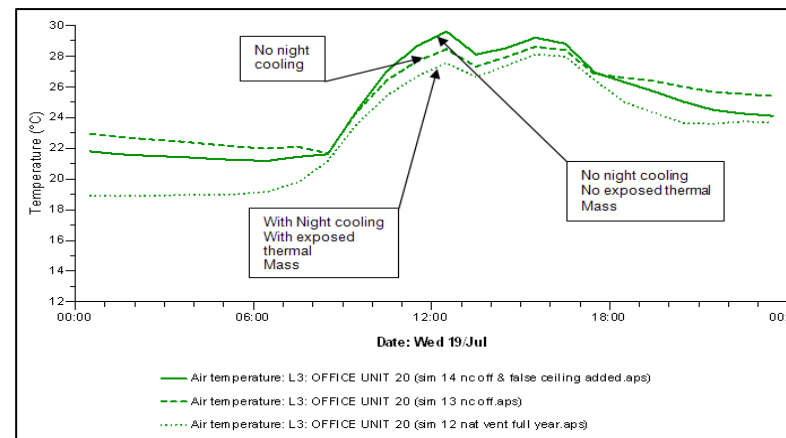
Dynamic Thermal Simulation & Bulk Airflow Analysis

- **Location:** Navan
- **Completed:** May 2008
- **Building Type:** Office Development
- **IES Office:** Dublin

- **Client:** Fitzwilliam Partnership



SunCast Solar Shading Analysis to assess the impact of proposed building on neighbouring buildings



Apache Dynamic Thermal Simulation Results allowed comparison of various strategies

Design, Simulate & Innovate with IES <Virtual Environment>

Fitzwilliam Court Balmoral Navan



IES's Role - Environmental Modelling Consultants

We investigated energy efficient design features on the building including:

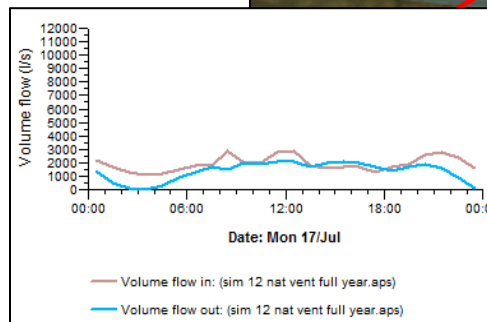
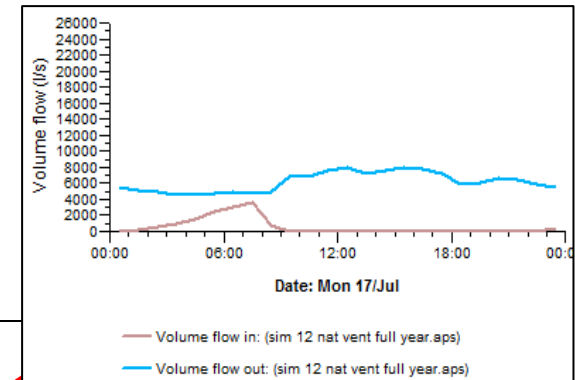
- External Shading to minimise solar gain
- High and low level window openings ensured greater penetration of air into offices
- Exposed Thermal Mass provided free cooling
- Passive Night Cooling

Impact/Benefit of analysis

- The need for artificial cooling in office space was eliminated
- Comfort conditions were maintained through passive control
- CO₂ and energy reduction

Which IES product's used?

- ModelIT
- Apache Sim
- SunCast
- MacroFlo



Natural Ventilation – Typical Airflow Through Atrium