IE_Tipperary_Department of Justice and Town Council

Image 01: Town Council Offices © Coady Architects	**Image 02:** Dept. of Justice Offices © Coady Architects	**Image 03:** Town Council Public Reception © Coady Architects
		

Building Specifications

Address	Tipperary, Ireland
Building Category	Office
Year of Construction	June 2012
Special Qualities	LEED 'Gold' accredited
Location	52° Northern latitude, 8° Eastern longitude. Located on the outskirts of the town with grasslands to the north
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)

The site consists of two buildings located beside each other on a west east axis. The design approach provides buildings with a civic character around a shared public space, providing a comfortable and enjoyable work environment for public servants, politicians and users of the offices. The plaza takes full advantage of the extensive site to provide an amenity filled setting for the new offices. Both buildings are formed by relatively narrow wings of office accommodation to ensure all offices avail of natural ventilation and daylight, reducing energy demand and costs, and providing occupant direct control of the internal environment. The buildings create gardens which become the focus of views from the workspaces that overlook it. The 'eco-minimalist' strategies adopted have delivered a highly sustainable building and work environment.

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

The specification of the building envelope exceeds the current building regulation's thermal performance requirements by 30%. The reinforced concrete used throughout includes 50% GGBS to reduce the embodied energy of the material. Responsibly sourced materials with low VOC were employed in the construction. The project received an airtightness result of 1.73(m^3/hr)/m^2 at 50Pa which is an exemplary result for a naturally ventilated building with over 500 opening sashes.

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

Windows have top and bottom hung casements that open to provide natural ventilation. South facing office elevations are fitted with brise soleil to reduce solar gain. Office spaces are naturally ventilated throughout the building with the exception of the meeting and conference rooms, kitchen and cafeteria and toilet. Mechanical ventilation and cooling is provided in the common rooms, conference, meeting rooms and interview rooms. Mechanical ventilation only is provided in the cafeteria and kitchen. Heat is recovered from extracted air in the toilets and applied to the fresh air supply.

A deeper than normal - 300mm - raised floor and additional space in vertical risers have been provided to provide ducted air to the offices, from roof mounted air handling units, or by passive means, should summer temperatures rise by 2-3°K in the life of the buildings due to the effect of climate change.

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

The offices are heated by radiators, locally controlled, supplied with heat from wood pellet boilers at ground level.

All artificial lighting is controlled by automatically dimmable PIR sensors.

Solar panels at roof level pre-heat the domestic hot water supply.

Low energy lifts were installed

Actuators, Sensors and Control Strategies

The top hung window sashes are operational by the BMS linked to temperature and CO_2 sensors to provide automated indoor environmental control, night purging and summer cooling. The building management system provides automatic performance data and managed control of all mechanical and electrical systems.

Building Ownership and Building Facility Management Structures

The building is owned by Tipperary County Council.

Architect: Coady Architects

Acknowledgements

n/a

Datasheet Source:

Coady Architects, Cork Institute of Technology