The Swanston Academic Building

The Swanston Academic Building is the largest construction project that RMIT has ever undertaken. The 35,000 m$^2$, 11-storey building will form a high-profile part of RMIT University’s “Swanston Street Precinct” and contains state-of-the-art, sustainable teaching and learning facilities. The Swanston Academic Building will also be the new home for the College of Business.

The Swanston Academic Building is aiming to achieve a Green Building Council of Australia (GBCA) 5-star Green Star Education Rating that signifies “Australian Excellence” in environmentally sustainable design.

Environmentally Sustainable Design Features

**High-performance facade**

The high-performance facade includes external sun shading, internal blinds and double-glazed units.

**Central Plant**

Chilled water for the Swanston Academic Building will be sourced from a chilled water plant room that is located on the roof of RMIT’s Building 12, opposite SAB on Swanston Street on the City Campus. This option is more energy-efficient than the installation of a localised chilled water plant on the roof of SAB.

**Water conservation**

Rainwater and grey water collection and reuse for toilet flushing and irrigation. Greywater is non-industrial wastewater generated from domestic activities that include dish washing, laundry and bathing. This water collection will reduce the landscaping demand for potable water (water that is safe for drinking) by at least 90%.

**Water efficient fittings and fixtures**

The fixtures and flow rates for toilet flushing and irrigation. Greywater is non-industrial wastewater generated from domestic activities that include dish washing, laundry and bathing. This water collection will reduce the landscaping demand for potable water (water that is safe for drinking) by at least 90%.

**Demand-based Control Ventilation (DCV)**

DCV maintains proper ventilation and improves air quality while saving energy. DCV reduces the total outdoor air supply to an indoor space during periods of less occupancy. Carbon Dioxide Gas (CO2) sensors control the amount of ventilation for the actual number of occupants.

**Displacement ventilation in lecture theatres**

Displacement ventilation systems supply air directly to the occupied area of a venue. This system is used for ventilation and cooling of large high spaces, such as lecture theatres, where energy can be saved if only the occupied zone is treated rather than trying to control the conditions in the entire space.

**Active Chilled Beams**

Active Chilled Beams will be installed in cellular and open-plan office spaces. Active Chilled Beam technology is a building conditioning system that uses convection and water – that is transferred through a hydronic water loop system – to efficiently move energy throughout a building for the purposes of heating and cooling. The chilled beam units are linear in form, giving the appearance of a beam.

Active Chilled Beams are known for energy-efficient, comfortable, quiet operation in a robust system and low maintenance requirements.

**Energy efficiency lighting**

Occupancy sensors – also known as ultrasonic switchers – activate lighting when movement is detected in a room. The lights remain turned on for as long as there is movement in the room. Lights automatically switch off when rooms are vacated.

**Metering (water and electricity)**

Building Management System integrated water metres will be installed throughout the Swanston Academic Building to allow remote monitoring of water consumption.

Energy metres will also be installed throughout SAB to allow remote monitoring of electricity and gas consumption of electrical and mechanical services.

**Low–Volatile Organic Compound (VOC) paints**

Volatile Organic Compounds (VOCs) refer to organic chemical compounds that have significant vapor pressures and can affect the environment and human health. Low VOC paints will be used throughout the Swanston Academic Building.

Opens 2013