

Thermal & Energy Laboratory

The thermal and energy laboratory is capable of testing the thermal conductivity of building materials, thermal and energy performance of wall specimens with a surface area of 1.2mX1.2m, and the air and water permeability and performance under a pressure difference of any vertical building envelope element, such as walls, windows and curtain-walls, with a surface area up to 4mX4m.



The specific equipment in this lab includes:

- Guarded Hot Plate: Thermal conductivity measurements of up to 5 cm thick specimens in the range 10°C to 50°C.
- Hot Box: For the investigation of steady-state thermal and energy performance of 1.2m X 1.2m wall specimens.
- Air and Water Permeability Test Facility: For investigating air and water tightness of up to 4m X 4m vertical elements. The nominal pressure difference capacity is up to 3000 Pa and the air flow range is 210 m³ h⁻¹.