



Centre for Electron Microscopy Monash University

Laboratories and research facilities with a human context and dimension are rare commodities. Monash University has a dedicated new facility designed by Architectus and the result combines technical virtuosity and luminosity

The world of electron microscopes demands highly specialized, purpose built environments. At a technical level this requires an understanding of the need to create a facility insulated from any external interference either magnetic, electro-magnetic or any kind of vibration.

To avoid magnetic loops no mild steel could be incorporated in the building, and its structure is fabricated entirely from timber, ply, and inert glass. The concrete reinforcement is individually earthed, no fluorescent lights are used near the microscopes, and all metal ductwork and pipework is fitted with isolation breaks every six metres. All

cabling is installed in twisted pairs, with a cable type developed for off-shore petrochemical rigs. In the FEGTEM lab, specialized shielding was installed, reducing the Electro Magnetic Field level to the lowest ever achieved in Australia.

Internally, considerable emphasis was placed on the quality of the environment for the occupants. Whilst addressing the technical demands of the building with diligence, there was a focus on providing ample natural light and comfortable working conditions. Circulation is intentionally designed to promote crossing of paths acknowledging that casual interaction and exchanging of information is an

important part of science. Ultimately, this building successfully cocoons its nine precious microscopes within the core, protecting them from any adverse, external effects. It is a building of layers, from the sheltering mound of earth and the outermost skins of the structure, to the innermost containers which hold the microscopes themselves.

Project Details:

Client: Monash University
Location: Clayton, Vic
Approx. Value: \$14M
Floor Area: 1300m²
Completed: 2007

Contact:

peter.slifirski@architectus.com.au