



Case Study

Clarendon School - Passivhaus Extension



Product Range: Passive House Range - Architectural Timber

Education buildings need to provide a safe and nurturing learning environment with building materials addressing sustainability and environmental impacts

Architects: Williams Boag Architects

Builder: S.J. Weir

Passivhaus

Certification: Hip v Hype



Photography courtesy of S.J. Weir



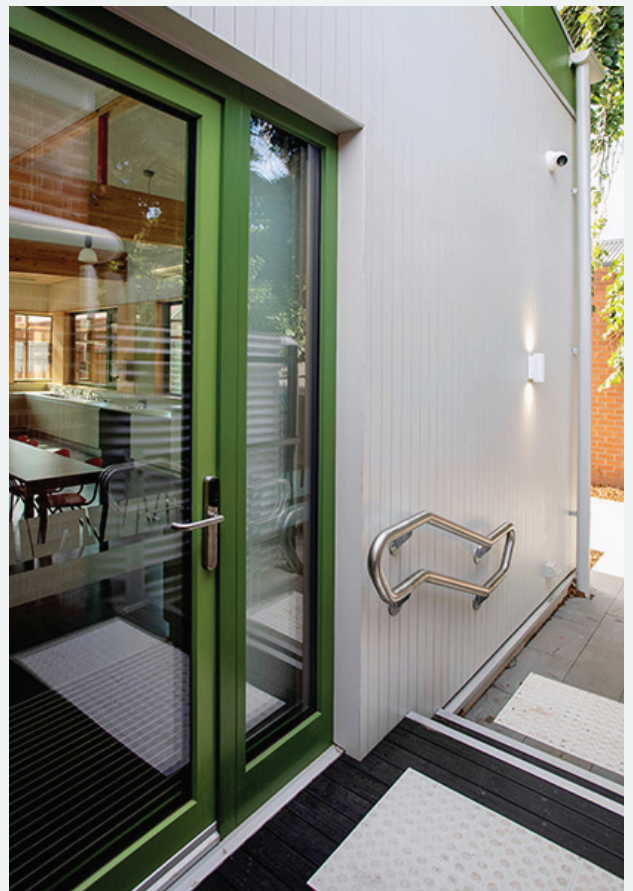
“Passive House windows and doors are required for the extensive renovation and extension”



Challenge

The Junior School Classroom project included the alteration of an existing historic Victorian home and an inter-war cottage converted to educational facilities plus new extensions to form a building that retains heritage while creating new high-performance facilities with reduced energy use and emissions.

The new part of the school also had to include a 2.4m high curtain wall, forming a 16m wide fixed glass façade.





Solution

Windows and doors with International Passive House Component Certification were made from engineered triple laminated frames. Certified sustainable timbers were used, Accoya® for both external layers as this is a modified timber resisting rot, and Glacial Oak for the internal layer, spraypainted with waterbased low VOC-paints. The glass used was triple glazed with 2x18mm airgaps and low-E coating.

The existing façades of the heritage cottage and Victorian home were retained including the original timber windows. Paarhammer windows were set in the interior behind the existing windows to provide the required insulation and energy efficiency.

