



TOP RYDE SHOPPING CENTRE

LOCATION TOP RYDE, NSW, AUSTRALIA

CLIENT BOVIS LEND LEASE

ARCHITECT KRIKIS TAYLOR ARCHITECTS AND
LEND LEASE DESIGN

VALUE AU\$1.2B

The Top Ryde project involves the construction of a new multi-storey mixed use building, replacing the existing shopping centre. The development will comprise a retail shopping centre, car parking, vehicular access tunnels, cinemas, gymnasium, childcare centre, medical centre, library, bowling centre and a Church, all spread over five below ground storeys and seven above ground storeys. Seven multi-storey residential towers are proposed to be constructed upon the upper carpark podium.

The fire engineering assessment has addressed a significant number of Building Code of Australia (BCA) Deemed to Satisfy non-compliances, inclusive of extended travel distances, reduced aggregate exit widths, reduced fire rated construction, non-compliant fire rated separation, reduced fire brigade access, non-compliant discharge from fire-isolated exits, non-compliant hose reel locations, extended hydrant coverage, oversized smoke reservoirs, rationalised smoke exhaust rates and the deletion of smoke exhaust and zone smoke control from selected areas.

These performance based Alternative Solutions, developed to assess these issues, provide the client with a high level of design flexibility, significantly increased lettable floor area, reduced construction timeframes and a substantially lower overall project cost.

Holmes Fire has undertaken extensive CFD modelling to rationalise smoke exhaust for a six-storey atrium, all retail mall levels, major tenancies and the two vehicular tunnels. This enabled the client to significantly reduce the smoke exhaust requirements throughout the building, providing substantial cost savings whilst also presenting a robust solution for the occupant egress non-compliances.

While minor amendments to the fire engineering report continue to be incorporated to take account of detail design changes, formal approval of the latest issued Fire Engineering Report has been provided by the NSW Fire Brigades, without the need for alterations to any of the near forty alternative solutions. Due to the size of the project, both construction and occupation are being undertaken over multiple stages. Holmes Fire has been able to accommodate this approach by providing multiple fire engineering reports and developing additional Alternative Solutions for temporary non-compliances within the occupied portions of the partially complete building.

As part of a very large design team, Holmes Fire has used its advanced communication and problem solving skills to understand and rationalise the requirements of all stakeholders to develop a fire safety design that is deemed acceptable and achievable by all relevant parties, including NSW Fire Brigades, Certifying Authority, an extensive design team, multiple architects, Energy Australia, an external fire engineering peer reviewer, retail tenants and of course, the client, Bovis Lend Lease.

