



FIRE CURTAINS WITH ALL THE BELLS AND WHISTLES FOR LEND LEASE



LEND LEASE - BARANGAROO TOWER 3, NSW

Builder: Lend Lease

Architect: Hassell

Fire Engineer: Defire

Sector: Offices

Application: Atrium, compartmentation and means of escape

TECHNICAL PROBLEM:

The Internal voids - including the inter-tenancy stairs-within Lend Lease tenancy fitout on levels 8-14 & 16-19 had to be fire separated from the remainder of the fire compartment. The fire separation of the internal voids had to be continuous between fire compartment. The fire separation of the internal voids had to be continuous between fire rated floor slabs - including the ceiling spaces & access floor voids.

In lieu of 120/120/120 fire rated construction, the separation may Utilize:

A) -/120/- horizontal fire curtains to provide fire separation of the voids at every second level ie levels 11 & 18. The horizontal fire curtains must be automatically close upon smoke detector or sprinkler activation within the two fire compartments that the fire curtains are separating.

B) Combination of -/120/120 fire walls and -/120/- fire rated glazing to provide separation of inter-tenancy stairs at every level. Where vertical fire curtains are propped, the following requirements are applicable:

- i. All vertical fire curtains on level 8 to 13 must automatically close upon smoke detector or sprinkler activation within any of those levels.
- ii. All vertical fire curtains on levels 16 & 19 must automatically close upon smoke detector or sprinkler activation within any of those levels.
- iii. The curtains must comply with the requirements for split drop delays & push buttons on the stair side.

GREENE SOLUTION:

The Lend Lease Fit out comprises floors of office use connected via open circulation stairs on Level 9-12 and 16-19. The interconnection of these levels created single fire compartments.

Once Activated, the vertical curtain/s will deploy to 2000mm AFFL & hold for 30 seconds. (SDD-Split Drop Delay). After the 30sec. Hold has expired, the curtain will continue to deploy to FFL.

The retract buttons can be pressed in a fire event to lift the vertical curtains to 2000mm AFFL & hold for 20 seconds before deploying again. This is to facilitate the evacuation of anyone who did not make it out when the curtain was deploying.

The red light warning strobes, located on both sides of the curtains, will activate until the curtain is in the fully deployed position & continue to operate until the curtain is reset. There is also a voice warning that says 'fire curtain descending' & notifies of any obstructions.

Benefits

- The curtains have been built into the walls and ceilings & so the Architectural design did not have to be compromised to create the required fire separation.
- The control panels have been hidden too but are at lower level which makes the Clients monthly testing quite easy.
- The use of emergency retract buttons & slit drop delay adheres to the Fire Engineers evacuation requirements in fire mode.

