



## RUNDLE PLACE, SA

**PROVEN PERFORMANCE. HOT  
SMOKE TEST 42M WIDE  
SMOKESTOP™ ACTIVE SMOKE  
BARRIER**

**Builder:** Hansen Yuncken

**Architect:** The Buchan Group

**Fire Engineer:** Umow Lai

**Sector:** Retail

**Application:** Retail



## TECHNICAL PROBLEM:

Managing the spread of smoke within large, open spaces is hugely challenging for designers when considering the life safety requirements of building occupants and evacuating plans during a fire emergency.

The retail space at Rundle Place has 4 interconnected floors, ceiling heights of 5 meters and large open floors areas which the designer had to consider when dealing with smoke management, migration and spread and ultimately how to channel it, impede it and extract it.

## GREENE SOLUTION:

Coopers Fire SmokeStop™ active smoke barriers were incorporated on all retail levels to separate the mall area into 2 separate zones when activated by general fire alarm (GFA). Each active smoke barrier deploys, at a controlled rate of descent under fail-safe by gravity, to 2.1 meters above finished floor level and therefore creating a baffle at ceiling height of approximately 3 meters in depth.

The active smoke barriers were used in conjunction with smoke exhaust fans with output up to 150m<sup>3</sup>/s. The largest width curtain on level 2 spanned some 42 meters in width and was constructed of 10 rollers each overlapping each other by a minimum of 400mm. A single common conjoined bottom bar held the complete smoke barrier together as one.

The design originally allowed for edge gaps up to 40mm at each end of the active smoke barrier to the building interface. However concern was raised with excessive deflection of the barrier due to the large air movement forces from the adjacent smoke exhaust fans. Standard side guides were installed, as tested as part of the system, ensuring deflection was controlled and the edge gap was reduced to zero.

## BENEFITS:

- ✓ Clear open spaces providing unobstructed line of sight with high ceiling heights
- ✓ Smoke safe zones created using active barriers
- ✓ Reduced reliance of mechanical extraction effecting cost savings due to reduced extraction rates
- ✓ Proven system performance by way of hot smoke testing
- ✓ Architecturally pleasing solution

