

COMPLETED PROJECTS

SITE:	Raine Square
LOCATION:	Perth CBD
SCOPE OF WORK:	Fire Protection – (Wet & Dry Fire)
COMPLETION DATE:	2012

Raine Square is located between Wellington, Murray and Barrack Streets in the Perth CBD. The square has a history dating back to 1883 when the Royal Hotel was first established.



Raine Square was one of the first major fire protection projects completed within the CBD of Perth.

The original Raine Square project consisted of a 22 level high rise office tower (40,000m²), 3 x basement car parks, 3 levels of shopping arcades, a food hall with capacity for 600 seats. There is a Roof Plant Room located on Level 22 and a Lift Motor Room on Level 23.

There is an underground access tunnelling under William Street connecting to the Perth Underground Railway complex. The fire services for the tunnelling were installed as part of the Raine Square project.

The Bankwest Place commercial tower is the major tenant for the high rise office tower, which opens onto the Murray Street forecourt for workers, shoppers and commuters to enjoy the surroundings.



SCOPE DETAILS

- Firesafe were engaged to install a combined Fire Sprinkler/Fire Hydrant system complete with Hose Reels, Fire Extinguishers, Fire Pumps, Fire Water Storage Tanks. We also installed a Fire Detection, VESDA and Occupant Warning System with multiple FIP's and Gas Suppression Systems throughout the building.
- Additionally as part of the fire sprinkler installation, there are Fire Sprinkler Drencher heads installed across various locations of the building including either side of the glass wall to the Bankwest William Street lift lobby entrance and the glass walls on the internal staircases of the office tower.

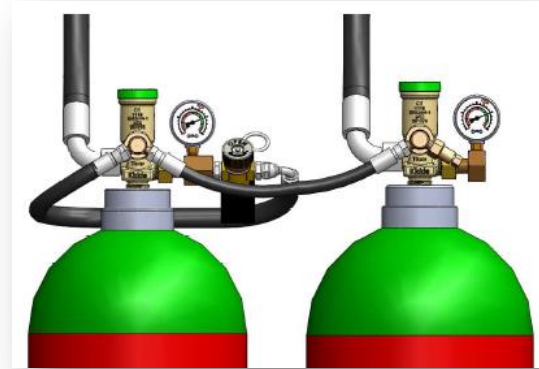
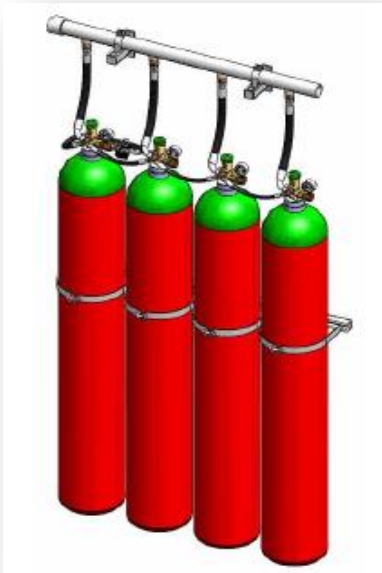


- The Fire Pump units for Raine Square are both electrically driven units which were installed to serve the levels from Basement 3 to Upper Retail level.
- The Fire Hydrant System for Levels 11 to 22 are fed from an Electric Booster Pump installed on Level 8. The water supply for this pump is via the Fire Brigade Booster truck through the High Booster set located on Wellington Street.
- Pre-Action Control Valve Sets are installed in the UPS Room in Basement 2 and also in both of the Comms Rooms on Level 3.



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- There is an Argonite (IG55) Fire Suppression system installed on Level 3 to protect the Comms Rooms 1 and 2



- A Fire Detection system was installed in the Level 3 Comms Room 1 and 2 and the Basement 2 UPS Room. This system consisted of a Conventional AMPAC Fire Finder Sub Fire Indicator Panel. The Sub Fire Indicator panel monitors devices installed throughout the communications rooms and UPS.
- An AMPAC addressable Firefinder Fire Indicator Panel was installed in the Fire Control Room on the Murray Street level, also networked Data Gathering Panels are located on Levels 8, 13 and 20.



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- Additionally a compliant Emergency Warning and Intercommunication system was installed with Evacuation Control Panels located in the Control Room, Security Room. Data Gathering panel was located in the Level 8 Plant Room and Occupant Warning lights were installed in the Cool Rooms and Plant Room.



Upon completion of the project, Firesafe tested and maintained the fire protection systems installed at this complex.

CHALLENGES & SOLUTIONS

Throughout the project there were various challenges which we had to overcome:

- As part of the install works within the tunnel, the 100mm Fire Hydrant service main clashed with the tunnel opening and required relocation. A new main had to be installed to rise up and pass above the planned tunnel opening and drop down on the other side to reconnect to the fire hydrants towards the escalators.

This was done without any shutdown of the active fire service. The existing Fire Service main had to be drained via the end hydrant through a hose to drainage points in rooms under the escalators and also at the Fire Hydrant control valve sets located within the complex. The pipe was then be cut and removed up to the next coupling joint. A new pre-made section was then put in place and both sides of the tunnel pipe works will were then joined.

- Firesafe worked closely with the Public Transport Authority regarding isolation procedures whilst these works were being completed.
- Works undertaken for this project being located within the centre of Perth CBD presented logistical challenges. Deliveries needed to be scheduled to avoid traffic disruption. Also the lack of on street parking required deliveries to be scheduled with precision, we needed to organise agreed drop points and times to best suit unloading.

Equipment needed to be moved from delivery points to the worksite with minimal interference.