

PROJECT:	One The Esplanade
LOCATION:	PERTH WA 6000
SCOPE OF WORK:	Wet/Dry Fire Protection
COMPLETION DATE:	December 2022
CONTRACT VALUE:	\$10 Million

MULTIPLEX

One The Esplanade is a 29-storey premium office tower located in the highly sought-after landmark at Elizabeth Quay which brings the CBD to the city waterfront. The tower's anchor tenant is Chevron Australia, and the development has been designed to complement the surrounding Elizabeth Quay precinct. The facilities offered with the building include End of Trip facilities, onsite childcare, gymnasium, executive concierge, a dedicated tenant app and secure basement parking. The complex also offers excellent links to public transport, parking and cycle paths to deliver great connectivity.

Upon completion the building will have 2,641 sqm of retail and ancillary space with the ability to house approximately 3,000 people.



Firesafe were awarded the contract to design, supply and commission a fully compliant Fire Sprinkler system and Fire Detection/Emergency Warning Intercommunication system to the new building.

SCOPE DETAILS

Within our scope, we were tasked with the design and installation of:

- Fire Sprinkler system in accordance with AS 2118.1-2017
- Fire Hydrant system in accordance with AS 2419.1-2005
- Fire Hose Reel system in accordance with AS 2441
- Fire Pump Sets in accordance with AS 2941-2013
- Fire Extinguishers in accordance with AS 2444
- A Fire Detection & Emergency Warning Intercommunication system compliant with AS 1670.1, AS 1670.4 and AS 1668.1

The automatic sprinkler system is separated into two different supplies. The lower levels including the two car park levels and Podium building from the Ground Floor to Level 3 are serviced by a duplicate town's main supply to provide protection to the Car Park areas classified as Ordinary Hazard II and the Podium building classified as Light Hazard, Ordinary Hazard I and Ordinary Hazard II.

Fire Sprinkler Control Valve assemblies have been installed in the Fire Pump Room and Fire Stairs. Each tenancy has its own monitored isolation valve and flow switch. These control valves provide any false alarm provisions, low pressure alarm, retard chamber/jacking pump as required and deemed suitable, DBA initiating device, relevant monitored isolation valves, water motor alarm going and common drain.



Tail End valve sets have been installed on Levels 3, 5, 18, 19 and 21.

A Pre-Action sprinkler system has been installed to service protection of the MCR Room on Level 11. The pre-assembled valve set, trims and electrical components are located in the cupboard adjacent to the entry of the MCR Room.



The Tower building, Levels 3 to 39 are serviced by a combined riser, including combined pumps and tanks too provide protection to the Office Levels classified as Light Hazard, Plant Areas classified as Light Hazard (ordinary hazard spacing).

The valve sets for the tower are in the fire stairs on each level.

The fire hydrants have been installed to meet Fire Brigade requirements and are installed at each level within the isolated staircase. The Fire Brigade Booster connection is a combined service to provide Brigade connection to the main combined Sprinkler and Hydrant service ring main, consisting of the required number of booster inlet and feed hydrant connection to suit boosting flow rates and pressure.



Fire Hose Reels have been installed throughout all Basements and Plant Room levels and are connected to the boosted combined fire services pipework infrastructure.

Fire Pumps consisting of combined fire sprinkler and fire hydrant pumps along with a dedicated Fire Brigade Relay pump have been installed and are housed within Basement 2 Fire Tank and Pump Room. These pumps supply the combined fire sprinkler, fire hydrant and fire hose reel systems. The pumps consist of a single stage electrical duty booster pump, a single diesel standby pump as well as a single stage diesel DFES relay pump. There is also a jockey pump installed to pressurize the system in the event of a small loss of pressure.



The water for the fire system is from 2 x new town's main supplies within the Basement 02 level of the building with a backflow prevention device. Firesafe extended from the connections provided by the Town's Main Sprinkler Valve Sets within the Basement 02 Fire Tank and Pump Room in addition to the tank infill connection to the concrete tanks. These tanks are 25KI effective capacity and were installed by other contractors.

Fire extinguishers were installed in all areas of the project in accordance with the BCA and Department of Fire and Emergency Services.

The Fire Detection and EWIS system has been installed complete with Fire Indicator Panel, Fire Fan Control Panel, car park ventilation system, override controls/AHU controls and interface device for Fire Brigade monitoring connections. The panels are located in the Fire Control Room on the Ground Floor. There are also networked Fire Indicator Data Gathering Panels reticulated up the building and a Mimic Panel located in the Security Room.



The main emergency control panel is located in the Fire Control Room on the Ground Floor, additionally there a Remote packaging console located in the Security Room. Warden intercom phones have been installed adjacent to the lift lobbies, fire pump room, booster cabinet, security room and nominated fireman's lift.

The EWIS zones are separated for evacuation including separate zones for the tenancies and the Tower. Break Alarm points are located adjacent to all Warden Phones.

