

PROJECT:	Glassford Warehouse
LOCATION:	KEWDALE WA
SCOPE OF WORK:	Wet/Dry Fire Protection
COMPLETION DATE:	April 2022
CONTRACT VALUE:	\$750,000.00

The Glassford Road warehouse located in Kewdale is a warehouse offering factory facilities with office space. The workshop provides overhead gantry cranes and has a floor area of 10510m². The building was originally owned and occupied by BGC.



SCOPE DETAILS

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

- A compliant ESFR Fire Sprinkler system in accordance with AS2118.1-2017
- Diesel Fire Pumps in accordance with AS2941-2008
- Fire Water Storage Tank complete with liner compliant with AS2304-2011
- Fire Extinguishers in accordance with AS2444
- Fire Detection & Occupant Warning System in accordance with AS1670.1-2018

The sprinkler system to the warehouse area is ESFR K17 installed at roof level which allows 12 sprinklers to operate simultaneously whilst delivering 350kPa of pressure.

This type of sprinkler install provides high hazard storage protection for goods including non-combustible products in compliance with the Australian Standard.

The Office areas and External canopies/awnings sprinkler installation are Light Hazard and Ordinary Hazard respectively.

Fire sprinkler control valves have been installed externally at the rear of the warehouse.



The water supply for the project is provided by 1 x 100% (350kL) capacity water storage tank, with no infill. Top up water for the tanks is from the sites hydrant system. A 100mm quick fill line has been provided for fast filling of the tank. Top up water for the tank is from the site hydrant system.

The fire pump set installed consists of a primary diesel and standby diesel pump complete with a jacking pump and are housed within a containerised enclosure.

The pumps and tank are located in the North-Western corner of the site.



The fire detection system consists of a new Fire Indicator Panel located in the reception area of the office area and also includes optical smoke detection, thermal detection, break glass fire alarms and monitoring equipment for the pumps, sprinklers, valves, solenoids, pressure switches and mechanical services. A red strobe light and bell is located outside the front entrance of the building to enable fire fighters to easily locate the FIP.

The Occupant Warning system has been installed to broadcast evacuation tones throughout the complex and will send a signal to DFES monitoring services. The system has four separate zones including the office, small warehouse, large warehouse north and large warehouse south.

CHALLENGES & SOLUTIONS

Throughout the project we were faced with various challenges:

The building and grounds were old and not well maintained and had been unoccupied for some time. Firesafe completed all the required builders works including bitumen repair and concrete works for the pumps and tanks.

The warehouse had no sprinkler protection, Firesafe were responsible for the full design of a sprinkler system to suit the purpose, being an ESFR system to meet the Australian Standards and DFES requirements and to also provide adequate fire protection at roof level for Category 1 to 4 commodities normally stored in open frame racks.

We were successful in executing all these works to meet the client requirements within the contract timeframe and to meet the PC handover date.