

Fire Research & Investigation Unit

Heads Up



BACKGROUND

A fire with an estimated monetary loss exceeding \$10million occurred in an Auckland food product distribution warehouse. While there were a number of factors that attributed to the fire growth, the business involved had a sound Disaster Management Plan and were able to continue trading soon after and beyond this event.

This document summarises factors in relation to this fire.

The building consisted of an open warehouse area of approximately 74m x 60m which had a concrete floor, concrete block lower walls with upper steel frames and cladding, steel roof trusses with long run iron and fibreglass reinforced light panels. There was an adjoining two level area approximately 27m x 26m which had glass exterior walls and housed offices on the first floor and a retail outlet on the ground floor.

The building had no fire protection systems installed, however was equipped with a monitored security system. The building was secured and the majority of it surrounded by a high security fence which had an electrified top section.

The main warehouse area of this building contained high rack storage with a heavy loading of mixed foodstuffs which represented a high fire loading. The building also contained other items such as a number of 40kg LPG cylinders and bulk vegetable cooking oil tanks.

INCIDENT DETAILS

Late on a Saturday evening a passing motorist realised there was smoke coming from the roof of this building, at that point there was no visible flame. Shortly after this a number of burglar alarm activations were received by the monitoring company with a nearby security patrol attending and confirming that the building was on fire.

As time progressed the fire service received multiple 111 calls advising them of this event and spectators began to see an orange glow from the roof area near the left rear of the building.

While the first attending fire appliance arrived just over 5 minutes after the first 111 call, there were issues gaining access to the heavily secured yard and building. It is estimated that it could have taken up to 15 minutes to make entry.

The fire was well developed on arrival of the first appliance and continued to grow. The level of the incident was upgraded then and again during the event as further resources were required. Multiple New Zealand Fire Service vehicles and staff attended through the night and following day.

A number of different mains supplied reticulated water in the streets around this building so therefore there was always sufficient water available for fire-fighting use.



FURTHER INFORMATION

This fire grew quickly through the heavily loaded high stack shelving. The fire was very hot and the roof structure was distorting. The roof light panels had failed although the long run iron was remaining in place.

Through the night, the majority of fire-fighting took place in a defensive tactical mode external to the building. This remained in place until the light of the following day allowed heavy machinery to be brought in to remove roofing iron, some wall cladding, and clear debris allowing further internal fire-fighting to be carried out in a safe manor to extinguish all pockets of fire.

There was a moderate wind (estimated at 10-15 knots) blowing diagonally across the building during the incident. Two adjacent buildings remained undamaged. The Fire Service used winching equipment to drag trucks belonging to the company away from the external walls of the burning building to prevent them from becoming involved in the fire.

When management of the company arrived, they were able to direct fire-fighters to some computer files crucial to their business. These files were retrieved by fire-fighters which allowed the company to action their disaster management plan. They were able to mobilise goods from a warehouse in Wellington so that they were still able to meet their customers orders with minimal if any disruption.

There was some run off from this fire which was not only creating a slipping hazard, but also had potential environmental issues. The local council were responded and sandbags were used to control the runoff. Booms were deployed into a waterway which had been contaminated prior to the control of the runoff.

Based on the information available when the investigation into this fire was carried out, the most likely cause of this fire is an electrical short circuit or earth fault in or near the main switchboard.

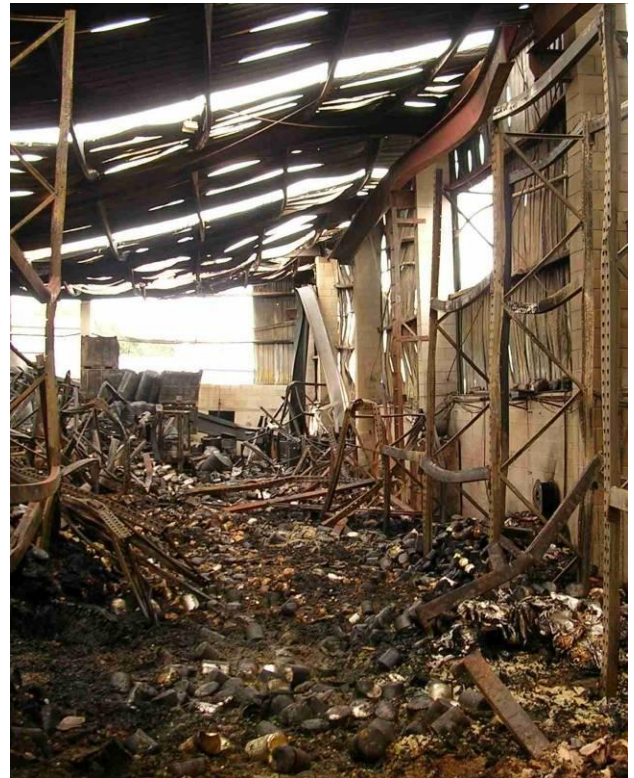


Photo showing distortion of steel structure and spillage of product from high rack shelving.

LESSONS LEARNED/RECOMMENDATIONS

A number of lessons were learned and recommendations made after this incident, these included the following:

- It is important that procedures are in place to meet local needs to ensure the management of potential environmental issues as a result of a major fire.
- The importance of encouraging businesses to have Disaster Management/Business Continuity Plans was highlighted at this incident. By having a plan like this in place and by fire-fighters working with management to retrieve critical records at the earliest possible time during operations, this business was able to continue operating sourcing product to make customer deliveries at 9am on a Monday morning having suffered this major event in the weekend.
- This business indicated that they proposed to rebuild and that they would take appropriate fire engineering advice while planning for this. Business operators do not need to wait for a major event like this to occur, all business and commercial building owners should consider installing suitable fire protection systems to minimise the risk of huge losses and interruption to business as usual from fire.

INFORMATION SOURCE

New Zealand Fire Service Operations Investigation Report, event number A521465.



For more information, or to contribute to 'Heads Up'
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