



PROPERTY PROTECTION

Holmes Fire has fire safety engineers with the skills and experience in developing holistic fire engineering strategies tailored to the specific needs of each project. We have developed fire engineering strategies for mission critical buildings - such as museums, archives and data centers - where operational continuity and property protection are important requirements, in addition to meeting life safety requirements. Holmes Fire's fire safety engineers have an in depth understanding of the specifics of active systems such as gaseous suppression systems, aspirating smoke detection systems and sprinkler systems. These have been applied to the following projects throughout New Zealand and Australia.

Australian National Maritime Museum

Holmes Fire undertook a fire safety audit for this project as part of a fire safety systems review since its original construction. New concept alternatives were developed for the fire protection systems to account for changes to the exhibits, integration of new and existing fire safety systems, long term upgrading plans and insurances and the museum's asset management requirements.

Auckland Art Gallery, New Zealand

Holmes Fire provided a fire engineering strategy for this project which featured existing heritage buildings and new buildings with large interconnected atrium spaces. We provided a fire engineering strategy which had to consider and control the spread of fire and smoke to protect the building fabric, the art collections and building occupants. Detailed modelling using Computational Fluid Dynamics was also undertaken to analyse smoke flow within the building.

National Library Refurbishment, Wellington, New Zealand

Holmes Fire provided a performance based fire engineering strategy for this project. The building has a footprint of approximately 18,000 m². The library contains collections in controlled atmosphere rooms and each space has its own air handler providing positive pressure to the space. As part of the fire engineering strategy, Holmes Fire undertook detailed modelling using Computational Fluid Dynamics to analyse smoke flow due to the opening atrium voids in floors to create interconnections between floors.

IBM data center, Auckland, New Zealand

Holmes Fire provided a performance based fire engineering strategy for this project. The building had a floor area of approximately 5,000 m² including a 1,200 m². The fire engineering strategy had to consider occupant life safety, property protection and operational continuity. The design incorporated a dry pipe sprinkler system instead of a gaseous suppression system. As part of the client brief, the design had to comply with NFPA 101 and the New Zealand Building Code.

Transpower NZ, New Zealand

Holmes Fire has recently completed this design which involved server rooms, battery rooms, switch-rooms, large transformers and special equipment areas. It also included specific detailed design and specifications that incorporated numerous gaseous fire extinguishing systems, pre-action sprinkler systems, CO₂ and O₂ detection systems and deluge systems.