



PROJECT
Museum Collection Centre

LOCATION
Aberdeen

INDUSTRY SECTOR
Heritage

PARTNERS
Balfour Beatty
engineering Services

Cameron Chisolm
Dawson Partnership

Robertson Construction

SOLUTIONS
42bar Sapphire
(featuring, Novec™ 1230
fire protection fluid)
distribution valve systems

BENEFITS

- Clean agent fire protection for valuable artefacts and assets
- Sustainable fire suppression solution

THE BACKGROUND

The new Museums Collections Centre has been built in one of Aberdeen's regeneration areas and will house publicly-owned works of art which are not normally on display in other galleries. Rather than just build a new storage facility the council wanted to create a venue where historical objects and artworks, not on display in other galleries, will continue to be seen by the community. It will also be a focal point for people to engage with arts and culture.

THE SOLUTION

“Sapphire combines a high safety factor with compact cylinder storage footprint”

Protecting sensitive works of art from fire needs careful consideration. A clean fire suppression agent which has a high safety factor and a compact storage footprint in a building already crammed with other building services was needed. Other requirements were approved fire equipment and a third party certificated fire company for design installation and commissioning of the gas suppression systems. With global warming an issue, an important consideration in the decision process was the environment. Sapphire Suppression Systems were proposed for the Centre.



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“A complex 42bar distribution valve system was configured”

A gas suppression system can provide the solution but different systems have different characteristics in terms of storage space and environmental profile. The key ingredient in Sapphire is 3M™ Novect™ 1230 fire protection fluid, which is used in systems around the world to protect high value assets. With everything considered it was agreed that for this particular application, Sapphire ticked all the boxes for the clients requirements. The systems are automatic and also have a manual release device at the entrance to each protected area. In automatic mode, two zones of detection would be activated before the system will discharge. This is accompanied by a series of audible and visual alarms to alert the occupants of system activation. Hold buttons are provided to delay the discharge, if necessary, should anyone be held up whilst leaving the room.

The green light for the fire protection systems came comparatively late in the construction programme and the project threw up some interesting challenges which were embraced by Vipond’s experienced designers. Many of the other building services were already installed when the systems were given the go-ahead to proceed. Due to space constraints, a complex 42 bar distribution valve system was configured. In the large Plant room, a bank of 8 x 180 litre containers were manifolded together providing distribution to four rooms through Selector Valves. This was augmented with 6 x 180 litre modular containers in the Plant room and a further 6 x 180 litre modular containers in the Multi-Collection store. Another bank of 6 x 180 litre containers with Selector valves were positioned in a smaller Plant room. All container banks operate simultaneously to provide just the right amount of Novect to the room where the fire is detected. A further smaller room housing important assets has its own system.

THE OUTCOME

With pressure on to complete the building, Vipond were able to provide the client with the resources to meet all the necessary design and programme time constraints and complete the systems to the clients programme.



COMPANY PROFILE

Vipond Fire Protection Ltd has its roots going back to 1969, when it was started as a small family owned business. In 1998 it was acquired by Vipond Inc of Canada. The company has since expanded and grown and now has 5 offices covering the whole of the UK and Ireland. Vipond Fire Protection Ltd is ultimately owned by API Group Inc.

API Group Inc. is a multi-billion-dollar parent company for 38 independently managed construction companies in more than 200 locations worldwide. API Group combines the personal attention of small-to-medium sized construction companies with the strength of a global industry leader to build a safer environment, develop leaders and bring innovation to the construction and fire protection and suppression industry. Since 1926, API Group has grown by acquisition to become the stellar multi-billion-dollar company it is today.

The secret? Our subsidiaries maintain who they are. They keep the identity, reputation, customer relationships and culture they’ve worked hard to establish.

API Group’s subsidiaries have collectively served customers on all continents, including Antarctica.

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