



#### PROJECT

Abbotsford Trust

#### LOCATION

Galashiels, Nr. Melrose

#### INDUSTRY SECTOR

Tourism / Historical Interest

#### PARTNERS

LDN Architects and  
Harley Haddow consulting  
engineers

#### SOLUTIONS

Water Mist for the Scott  
Rooms and Residential  
Sprinkler Protection for  
other areas

#### BENEFITS

- Safeguarding a Historic  
Building and Sir Walter  
Scott Transcripts and  
Artefacts

#### PRODUCTS

Low pressure Water Mist  
and Sprinkler System

#### THE CHALLENGE

Abbotsford House is a historic country home in the Scottish Border town of Galashiels. It was formerly the residence of historical novelist and poet, Sir Walter Scott, who following the acquisition of adjacent land developed the farmhouse into the magnificent house it is today.

As Scott became recognised as an accomplished author and poet and with money flowing in from his work, he was able to turn the courtyard of the farm into a Study, a Dining Room, an Armoury and a Conservatory. By 1818 Scott was talking of adding a library to the already substantial alterations. The old farmhouse was demolished to make way for a large rectangular building housing an entrance Hall, a new Study, the library and a Drawing Room.

Several architects, craftsmen, designers and artistic friends contributed but the principle architect was William Atkinson who was responsible later for the remodelling of Chequers in Buckinghamshire. The interiors were decorated by David Ramsay Hay of Edinburgh, who later redecorated the Palace of Holyrood for Queen Victoria. The decor is both extravagant and exudes opulence. The complex fabric of the building and its historical importance provided a challenging backdrop to design and install an effective fire safety system.

#### THE SOLUTION

Due to the delicate nature of transcripts and finishes in the Scott Rooms, comprehensive discussions were held with Historic Scotland to ensure that the nature of the fire protection provided would be effective, and importantly, in keeping with the nature of Abbotsford House.

It was determined that a conventional fire sprinkler system would be inappropriate in some parts of the property, notably the Walter

“delicate  
transcripts and  
artifacts to be  
protected”

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#### 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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Scott Rooms. A low pressure water mist was proposed instead to enable a firefighting capability from a significantly reduced quantity of water. The potential damage to precious artefacts would be minimised as a direct result of this fire strategy. It was agreed early in the consultations that a single water tank would be located in an external plant room. Two electric pumps were installed, one for the water mist system and the other for the other areas to be protected by sprinklers.

Water mist is defined as a water spray where the water droplets are less than 1000 microns (1 mm) Reducing the water droplet size increases the surface area and allows for a larger cooling effect than with conventional sprinklers. Because the water mist droplets are so small, they quickly evaporate when exposed to flame, converting to water vapour. This expansion rate is a factor of 1650 and because of this massive expansion the oxygen feeding the fire is displaced and effectively blocks it from the fuel source.

In all other areas within the building, a residential sprinkler system was installed using concealed heads. The sprinklers system was designed and installed in accordance with BS 9251:2005 for domestic / residential applications and coverage extended throughout the building including holiday apartment lets in the basement, ground floor, 1st, 2nd and attic floor.

#### THE OUTCOME

The installation of the mist and sprinklers systems now safeguards a historic building and its artefacts, collectively they provide a level of assurance that the irreplaceable documents and the historic building and finishes are safeguarded from fire and also given a level of protection appropriate to the delicate nature of the premises.

Historic buildings of this nature are an important part of our heritage and Vipond is proud to have completed this project. Our expert team of designers, project managers, site crews, and safety professionals worked together as a team, to identify the challenges, and provide solutions which would preserve the beauty and majesty of this important house whilst protecting the building and its contents from the ravages of fire.

