



**VESDA<sup>®</sup>**

Aspirating  
Smoke Detection

Heritage

 **xtralis<sup>®</sup>**



## What will you tell your customers?

The damage bill from a warehouse fire is not limited to lost goods or buildings. Environmental damage to the local area, the cost of business interruption and the negative impact of press coverage following a spectacular blaze may also have severe business implications.

## Overview

Heritage buildings are the homes of irreplaceable architecture, works of art, archives, libraries, furniture and many other items owned by nations or private individuals.

Because conventional detection has proved to be difficult to install discretely, smoke detection has generally been reliant on the actions of the occupants with suppression by the fire brigade.

A heritage fire results in the loss or damage of irreplaceable artefacts due to fire, smoke or water.

## A unique challenge

Due to the aesthetics of most heritage buildings, such as ornate ceilings or ceiling art-work, a discreet, unobtrusive smoke detection system is often desirable.

Large, open atria or voids feature stratified, thermal layers that can prevent cooled smoke from reaching ceiling level. As such, conventional systems will normally only respond when a fully-fledged fire condition is reached, by which time significant damage has already occurred.

## Why Aspirating Smoke Detection and VESDA?

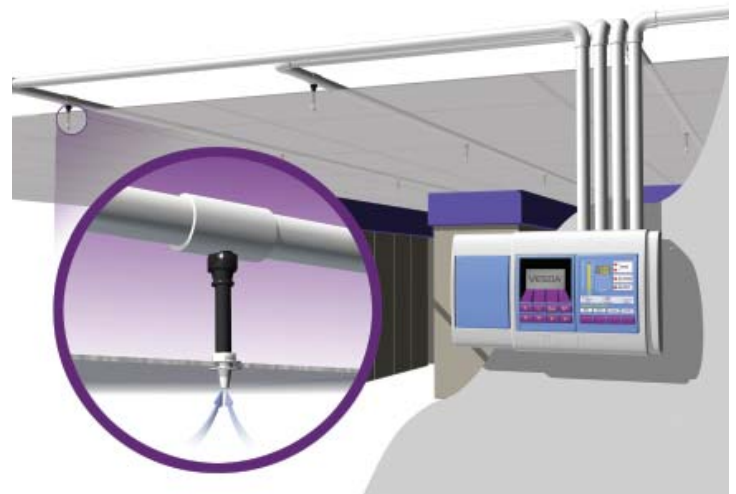
VESDA (Very Early Smoke Detection Apparatus) provides the discrete detection required in heritage buildings by routing the sampling pipes in areas that are not visible from normal occupancy.

Small-bore capillary pipes are used to provide detection at the required location. The room fabric often dictates the location of these capillary tubes. Hiding the capillary tubes behind light fittings, blending in with ceiling paintings or forming part of the ceiling sculptures can all be used to provide 'invisible' smoke detection.

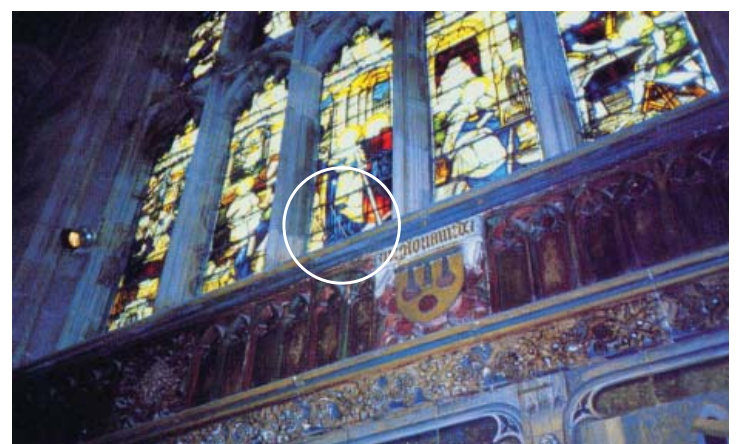
In high volume, atria applications such as cathedrals, capillary sample points can be routed into the area at intermediate vertical levels to good effect to overcome stratification. The higher potential sensitivity of the VESDA system means that less smoke is required at the sample points to provide an alarm condition.

## How does Aspirating Smoke Detection work?

Air is continuously drawn, from an area, via a pipe network, to a central detector that is continuously sampling for small traces of smoke.



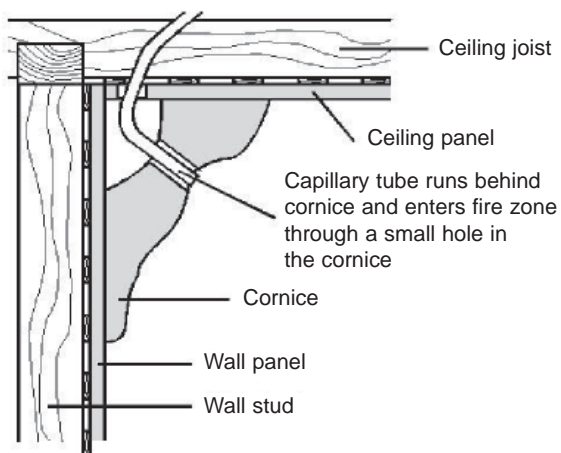
1 VESDA Pipe Network



2 Capillary tube protruding in to the risk



## A typical Heritage example



3 Pipework can be routed, via capillary tubes, to a convenient location within the risk area, using the building fabric to hide the sample points



4 Topkapi Palace, Turkey protected by VESDA using concealed capillary sampling tubes

## Where can VESDA be applied?

- Cathedrals
- Churches
- Stately Homes
- Museums
- Libraries
- Archives

## Heritage sites which rely on VESDA

- St Paul's Cathedral – London
  - Prime Ministers Weekend Home – Chequers
  - Mappa Mundi – Hereford Cathedral
  - House of Lords – London
  - National Gallery – London
  - Osbourne House – Isle of Wight
  - Top Kapi Palace - Istanbul
  - Finland National Art Gallery – Helsinki
  - Kings College – Stockholm
  - Culzean Castle – Ayrshire
  - Winchester Cathedral – Winchester
  - Chapel Royal – Dublin
  - Lulworth Castle – England
  - Rycote Chapel – Oxford
  - St James' Palace – London
  - Truro Cathedral – Truro
  - Birmingham Cathedral – Birmingham
- and many more...

Xtralis' global network of offices and representatives means that help is soon at hand



## When selecting a Very Early Warning Air Sampling Smoke Detector, insist on:

- World's widest sensitivity range
- Dynamic Sensitivity Range
- Most advanced and redundant peer to peer communication network (VESDAnet)
- Programmable alarm thresholds
- Advanced filter technology
- Comprehensive event log and reporting
- Comprehensive product range
- Absolute fixed calibration
- Worldwide-accredited global distribution and support network

## Global Approvals



[www.xtralis.com](http://www.xtralis.com)

**The Americas** +1 781 740 2223 **Asia** +852 2297 2438 **Australia and New Zealand** +61 3 9936 7000  
**Continental Europe** +41 55 285 99 99 **UK and the Middle East** +44 1442 242 330

The contents of this document are provided on an "as is" basis. No representation or warranty (either express or implied) is made as to the completeness, accuracy or reliability of the contents of this document. The manufacturer reserves the right to change designs or specifications without obligation and without further notice. Except as otherwise provided, all warranties, express or implied, including without limitation any implied warranties of merchantability and fitness for a particular purpose are expressly excluded.

This document includes registered and unregistered trademarks. All trademarks displayed are the trademarks of their respective owners. Your use of this document does not constitute or create a licence or any other right to use the name and/or trademark and/or label.

This document is subject to copyright owned by Xtralis AG ("Xtralis"). You agree not to copy, communicate to the public, adapt, distribute, transfer, sell, modify or publish any contents of this document without the express prior written consent of Xtralis.

Document 10441 Version 02

