



Alert Technology - Domestic Case Study

Project Overview

Property Type - Domestic Property, build date 1938

Scope of Works - Major refurbishment

Survey Completed - Project Specific Refurbishment Survey

Asbestos Identified - Chrysotile, Amosite & Crocidolite

Pro1000 Usage - Reassurance following asbestos removals



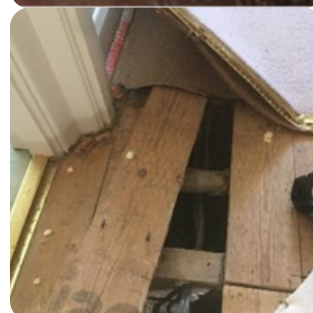
Background

A four-bed detached property constructed from brick / block walls with internal plaster walls and fibre board ceilings was due to be thoroughly refurbished throughout. Due to the heavily invasive planned works and the known risk from asbestos an asbestos survey was commissioned.

A project specific Refurbishment and Demolition (R&D) Survey (as defined in HSG 264) was undertaken to identify the presence and extent of asbestos. Insulated pipe was identified in the loft, further surveying identified that asbestos pipe insulation passed into varying floor voids on the ground floor where debris was also located. The insulated pipework identified in the loft passed down the perimeter of the property, access was made into the floor void within the Bedrooms in six locations - in these areas modern copper pipework was noted. Alongside the pipe insulation and debris other asbestos containing materials were discovered this included roof tiles, cement, underlay and bitumen.

Asbestos Register

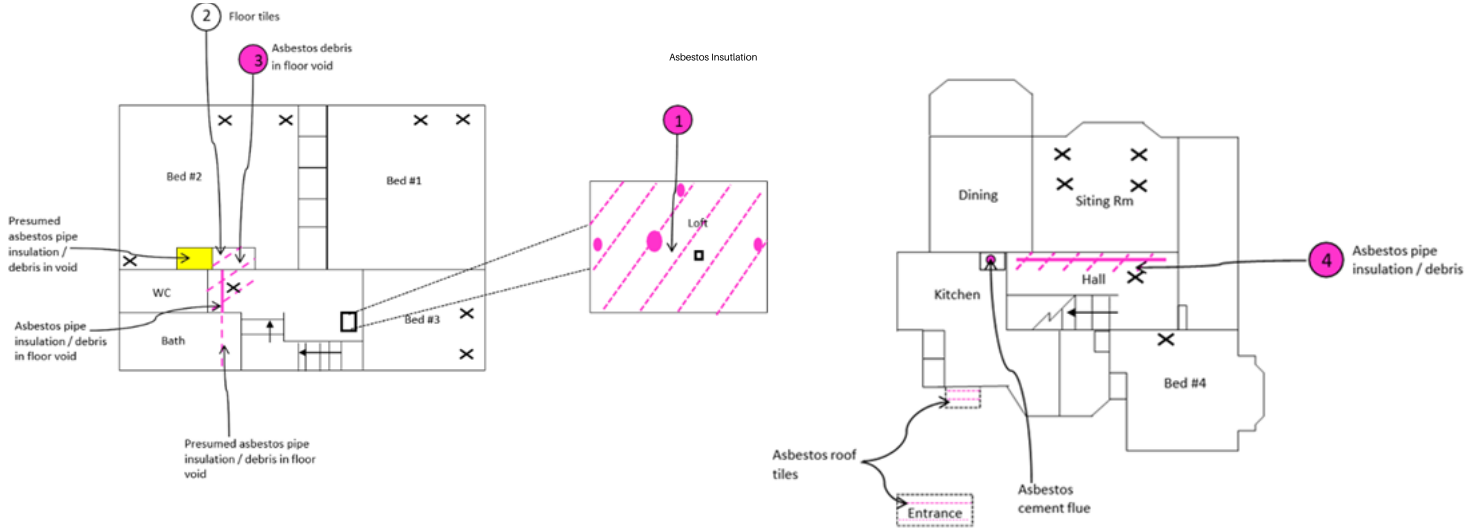
First	X004	Landing	Pipe insulation in floor void	Remove under controlled conditions by approved contractor
First	X004	Landing	Debris in floor void	Remove under controlled conditions by approved contractor
First	Presumed	Void adjacent Water Pump Cupboard	Pipe insulation / debris	Remove under controlled conditions by approved contractor
First	Presumed	Bathroom	Pipe insulation / debris	Remove under controlled conditions by approved contractor
Ground	004	Entrance Hall	Pipe insulation / debris	Remove under controlled conditions by approved contractor
Ground	Visual	Kitchen	Cement flue above boiler	Remove under controlled conditions by approved contractor





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Location of the Asbestos

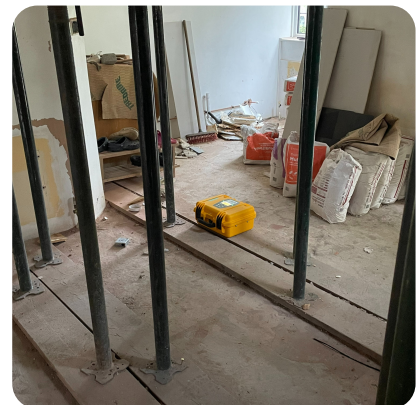
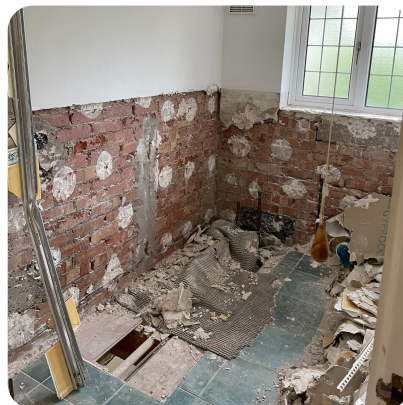


Asbestos Removals

Following the positive identification of asbestos containing materials and the additional sampling of previously presumed items, asbestos removals were undertaken. All asbestos work was completed in accordance with the HSE Approved Code of Practice (ACOP) L143 (Second Edition) 2013 "Managing and Working with Asbestos" in conjunction with "The Control of Asbestos Regulations 2012".

All identifiable and accessible asbestos insulation and associated pipework along with debris was to be removed with an independent UKAS accredited analyst carrying out a 4-stage clearance test of the work area, which included monitoring of the decontamination unit and agreed transit route.

Upon the completion of the planned works, the independent UKAS accredited analyst passed the 4 stage clearance and signed off the works.





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Post Removals

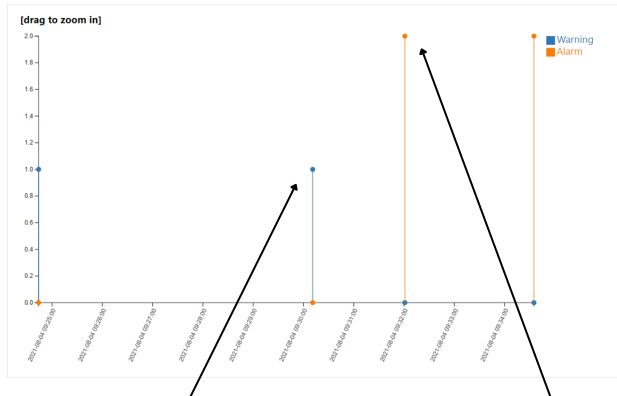
Following the completion of the asbestos removals, other trades were able to undertake their planned works on site. The immediate works included the removal of remaining asbestos-free pipes, other services, and the entirety of the flooring.

During the completion of the additional non-asbestos works, an Alert Pro1000 was positioned on-site to provide reassurance to the employees that the risk from asbestos was being monitored. On the first morning that works commenced following the completed asbestos removals, the Pro1000 alarm was sounded within 20 minutes of being on-site.

Please see below for the graphs that were developed based on the data collected by the unit:

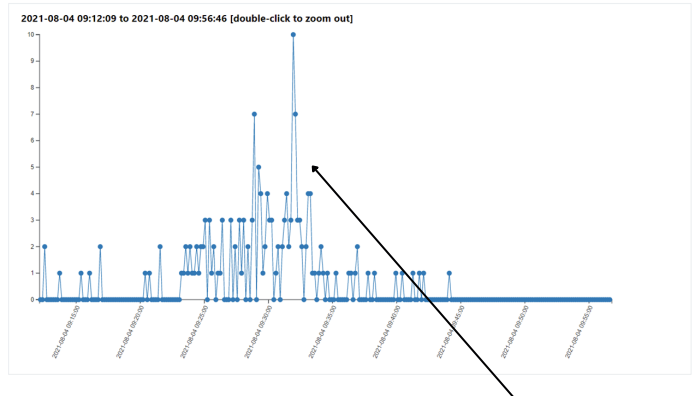
Alarms and Warnings Graph

Warnings(1) and alarms(2) over sampling time



Fibres Graph

Count of fibres over sampling time



Warning - This illustrates the first time asbestos was identified as being within the air. At this stage the unit is 99% accurate with a 1/100 chance of a false positive.

Alarm - This illustrates the second time asbestos was identified as being within the air. At this stage the unit is 99.9% accurate with a 1/10000 chance of a false positive

Timestamped data showing peaks and troughs in fibre levels offering the ability to review risk based on specific short term or sporadic activities.

Summary

During this project the Pro1000 was able to offer a number of benefits:

- The early Identification of airborne asbestos fibres
- The prevention of increased exposure
- Increased efficiency in identifying the source of contamination
- The utilisation of timestamped data to identify the activity that casue the disturbance
- Reduction in cost of remediation through reduced contamination

Had the unit not been on site, the previously unidentified but now disturbed asbestos may have caused widespread contamination and prolonged exposure.

