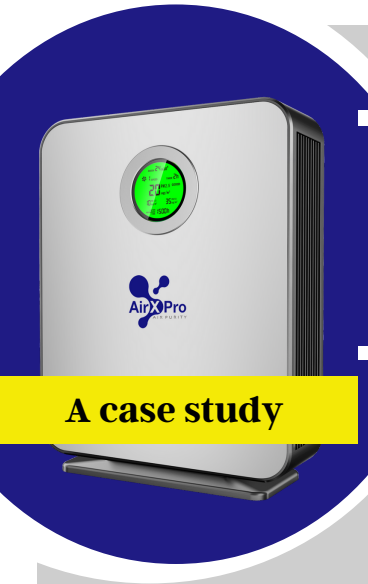
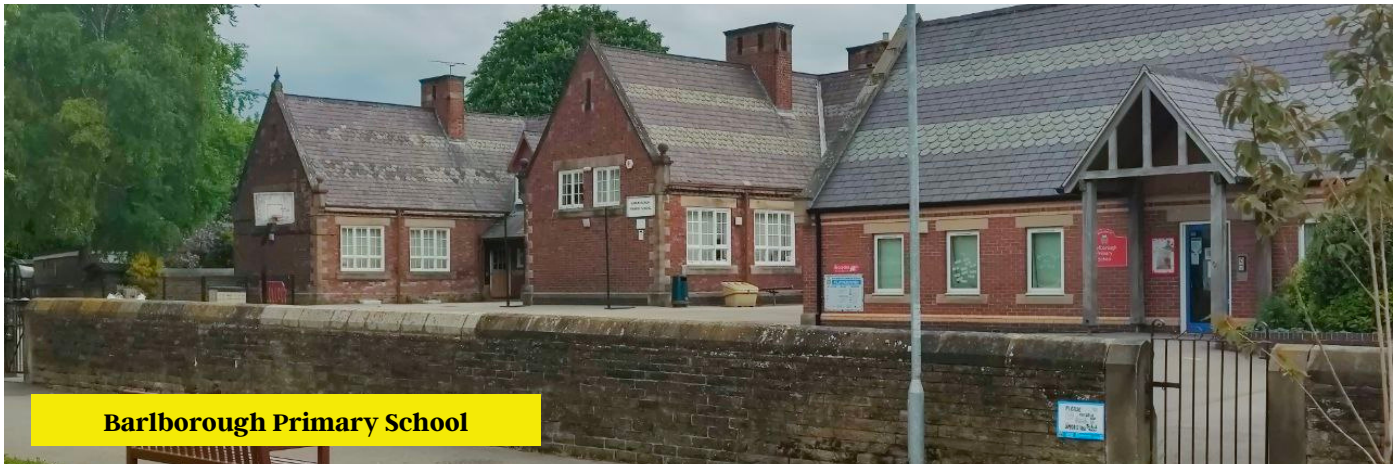


A case study

AIR FILTRATION EXPERTS WIN HIGH PRAISE FOR SCHOOL PILOT

Martin Industries, the manufacturer of the AirXpro Air Filtration device, has drawn grateful praise for playing a significant part in a five-month school pilot to assess the value of using air filtration in support of Covid-19 mitigation.

Bournemouth based Martin Industries Limited has enjoyed glowing feedback after agreeing to take part in a pilot, organised by The Air Purification Trade Association (APTA) to help a Derbyshire based school. The pilot, which saw two other schools benefit, was created to help highlight the value of using air filtration as part of a Covid-19 mitigation plan. This article looks at the background to the pilot and some of the learnings that were acquired.



Barlborough Primary School

Situation Assessment

Barlborough Primary School is located in Derbyshire. It is an old school, with high ceilings, and it possesses no mechanical air ventilation or filtration systems. Like many schools across the United Kingdom, Barlborough school was badly affected by Covid-19 breakouts, seeing the virus affect both children and staff. At the height of the pandemic, the school's attendance statistics were down to a 70% level.

World Health Organisation concerned about air quality in UK Schools

In addition to the global pandemic, UK schools are badly affected by the presence of an unsafe level of Particulate Matter (PM 2.5) as reported by the World Health Organisation (WHO. References to the Particulate Matter challenge are shared at the end of the article.

The value of Air Filtration

A growing number of clinical trials and scientific studies are unequivocally proving the value of Air Filtration to support Covid-19 mitigation. As an example, an NHS study at Cambridge University Hospital in September 2021 proved that Air Filtration units were effective at removing the Covid-19 virus from the air in an active Covid-19 treatment ward. Whilst in Australia, respected scientist Professor Jason Monty conducted experiments in Melbourne hospital to prove the value of stand-alone Air Filtration units for cleaning indoor air. Links to these stories are provided at the end of the article.

THE PILOT OBJECTIVES

Organised by the Air Purification Trade Association (APTA) the pilot's main objective was to:

- Help schools to better understand the subject of indoor air quality control
- Give the school devices to allow them to influence indoor air quality
- Measure the impact of the Air Filtration devices in reducing teacher and student absence during the Covid-19 pandemic
- Gain a flavour for the levels of dangerous PM 2.5 inside the school

Our schools need help with indoor air quality control

THE PROCESS

The AirXPro devices were set up in the six classrooms by a small team from APTA. Different sizes of machines were provided to match the clean air delivery requirements (CADR) of the six classrooms.

All of the staff at the school attended a briefing, where they were told how to use the machines. They were also given some facts about indoor air quality and the role and value of the Air Filtration devices they now had in place.

About the AirXPro Air Filtration devices

- Contains a medical grade HEPA 13 filter, proving 6 months life@ 8 hours per day
- Uses a seven stage filtration process
- Includes concealed and safe ultra-violet lights
- Is AAA energy rated for low electrcity usage
- Five different models can work with most room sizes. The largest is 2 metres tall
- Either floor standing or wall mountable - useful for school space challenges
- Fully remote controllable. Includes an App for full off-site control and monitoring
- Has a clearly visible air quality monitor for PM 2.5, 10 and 1.
- Includes a filter life counter
- Child lock and so is tamper proof for kids in schools

Note: HEPA filters and UV light were recommended by the Health & Safety Executive and SAGE in some of their guidance. Given the WHO concerns about PM 2.5 level for UK schools, air quality monitoring is a very useful feature.

THE PILOT OUTCOME

At the height of the pandemic, the school's attendance statistics were down to a 70% level. Attendance statistics during the full length of the pilot saw an average increase of over 35%. A huge difference.

School attendance figures during the pilot were -

- December 2021 - 95.35%
- January 2022 - 94.84%
- February 2022 - 96.26%
- March 2022 - 93.32%
- April 2022 - 94.07%

During the pilot, the PM 2.5 monitors built into the machines revealed an average reading of 2, significantly below the figure of 10 that the World Health Organisation is so worried about.

The PM 2.5 reader on the AirXPro provided useful feedback

THE FEEDBACK

"Parts of our school are very old, and we don't have the benefit of modern ventilation systems. Considering this predicament, we are grateful to Clean Your Air, APTA and to AirX Pro, the manufacturer who provided our machines. The last two years have been especially challenging for all schools – including teachers, staff, pupils and parents. It's heart-warming to feel that people care and APTA have worked with us to ensure we continue to follow HSE guidance, with these new machines giving us an extra layer of essential protection"

Kerry Towndrow Birds
Headteacher, Barlborough Primary School

"There is a growing body of evidence to prove the value of stand-alone Air Filtration units and we are pleased and proud to have given Barlborough Primary School access to machines that can help to reduce risk of airborne infection and those dangerous PM 2.5 particles. Working alongside APTA, we are committed to making sure the UK government and local authorities around the UK understand the true value of Air Filtration and this pilot should help with that objective"

Julian Martin
Managing Director, Martin Industries Ltd

APTA COMMENT

"Firstly, we would like to thank Julian Martin for supporting this project and gifting £10,000 worth of equipment to Barlborough school. Clearly, Covid-19 has created very challenging circumstances for the people of Britain and the UK authorities. Our schools have been especially badly impacted. Our government has been under intense pressure from all quarters in these unprecedented times, and we do not wish to unduly criticize them. However, there is a clear and growing body of evidence in support of Air Filtration units that use HEPA filters and UV lights. The results of this pilot add only more evidence to support the credibility and benefits of using stand-alone air filtration machines to improve air quality and reduce the prospects of viruses and other air-bound nuisances.

With almost 9 million pupils attending 25,000+ UK schools - schools that are served by almost 1 million staff, and with staff and pupils spending hours in the same indoor space, our schools can become one of the main breeding grounds for Covid-19 and other viruses.

This begs the question, what is more, important than the health of our children and the teachers that serve them? Our research shows that large percentages of our schools have antiquated building facilities, they are sometimes woefully under-resourced and lack guidance on how to effect better quality air to protect our children and their teachers.

When you add the Particulate Matter challenge that UK schools are confronted by into the mix, APTA would like to see the UK government develop a clearer and more defined strategy to support indoor air quality control and improvements. Our own attempts to work with the Department for Education have, so far, been met by very little in the way of support. We hope this begins to change"

David Lilley
Chairman APTA
E-mail: david@theapta.co.uk

RESEARCH REFERENCES

SOURCES FOR REFERENCES IN THIS REPORT:

1. Cambridge University Hospital Study. Link here
2. Professor Jason Monty of Melbourne University. Link to video here
3. Global Action Plan study on poor air quality in UK schools. Link here
4. Scientists express concern about airborne spread of Covid-19. Link here
5. World Health Organisation video about air pollution damage to health. Link here
6. WHO air quality guidelines. Link here

ABOUT APTA

The Air Purification Trade Association (APTA) is a not-for-profit company, formed to bring together caring manufacturers, experts, and scientists from the air filtration and ventilation sector. Our primary mission is to help increase indoor air quality literacy and support building operators and consumers in accessing credible information and suppliers to support cleaner indoor air.

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