



INTELLIGENT
MEMBRANES

WHITE HAUS TIMBER FRAME



**EVERTON HEATH SCHOOL
PASSIVHAUS STANDARD BUILD**

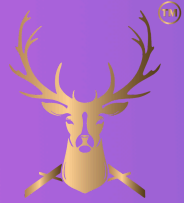
PASSIVE PURPLE & PASSIVE PURPLE BRUSH



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Building for the Next Generation

Everton Heath Primary School required additional teaching space to support its growing pupil numbers.

The project involved the construction of a modern timber-frame classroom building designed to provide a comfortable, sustainable and energy-efficient learning environment while overcoming challenging site access restrictions.

Working alongside White Haus Timber Frame, Intelligent Membranes supplied Passive Purple and Passive Purple Brush as part of the building's airtightness strategy.



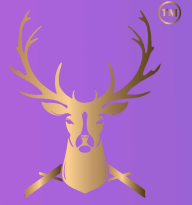
Long-Term Performance

The airtight layer is not a temporary measure; it is intended to perform for the entire life of the building. Durability, compatibility with surrounding materials, and resistance to damage are all critical to maintaining airtightness over time.



When the airtight layer is continuous, well-detailed, and properly installed, it quietly supports the building's comfort, energy efficiency, moisture control, and durability, often without being seen or noticed.

Overcoming Site Access Challenges



The school's constrained location meant that construction had to be carefully planned to minimise disruption while maintaining programme efficiency.

Timber-frame construction provided the ideal solution, allowing large sections of the building to be manufactured off-site and installed quickly once delivered to site. This approach reduced construction time while supporting the project's wider sustainability objectives.



Did You Know?

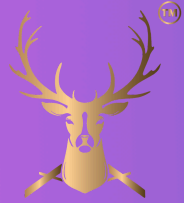


Timber frame buildings can be constructed significantly faster than traditional masonry structures because large sections are manufactured off-site before arriving on site ready for installation.

This reduces construction time, minimises disruption and allows projects such as schools to become operational sooner.

Timber is one of the few naturally renewable construction materials available today.





Creating an Airtight Learning Environment

Achieving ultra-low air leakage rates requires more than quality materials. Every junction, board joint, service penetration and structural connection must form part of a single continuous airtight layer.

Passive Purple and Passive Purple Brush were applied throughout the building envelope to seal critical airtightness details, including:

- OSB board joints
- Window and door interfaces
- Service penetrations
- Structural connections
- Timber-frame junctions



The combination of spray and brush-applied membranes ensured continuity across the entire structure while simplifying installation around complex details.



Designed for Comfort and Performance

Modern schools must provide more than additional classroom space. They must create healthy, comfortable and energy-efficient environments that support learning while reducing operational costs and carbon emissions.

By incorporating a robust airtightness strategy, Everton Heath Primary School was able to maximise energy performance while improving occupant comfort for both pupils and staff.



Comfort



Energy



Moisture

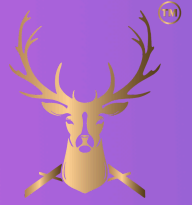


Ventilation



Durability

An Air Test Result Worth Showing the Headteacher



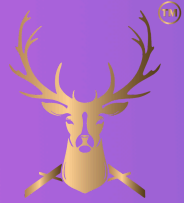
Through careful detailing and the extensive use of Passive Purple and Passive Purple Brush, the completed building achieved an outstanding airtightness result of:

0.03 ACH

If airtightness performance came with report cards, Everton Heath Primary School would have achieved an A+.

This exceptional result demonstrates the effectiveness of combining modern timber-frame construction with proven airtightness solutions, helping create a high-performance learning environment for future generations.





Why Choose Passive Purple?

Proven Airtightness. Trusted Performance.

Creating a truly airtight building envelope is one of the most important factors in delivering energy-efficient, comfortable and durable buildings.

Passive Purple has been developed to simplify airtightness detailing while providing outstanding long-term performance across a wide range of construction projects.

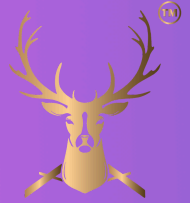
Whether you're working on a Passivhaus development, deep retrofit, school, healthcare facility or residential project, Passive Purple helps create a continuous airtight layer that reduces uncontrolled air leakage and improves overall building performance.



- allows Moisture Control Design compliant with
- ✓ EN 15026
 - ✓ ASHRAE 160
 - ✓ DIN 4108



Delivering Performance Beyond Construction



The completed Everton Heath Primary School building demonstrates how modern timber-frame construction and robust airtightness detailing can work together to deliver exceptional building performance.

Through the use of Passive Purple and Passive Purple Brush, a continuous airtight layer was created throughout the building envelope, helping to minimise uncontrolled air leakage and support long-term energy efficiency.

By combining off-site timber-frame manufacturing with high-performance airtightness solutions, the project team was able to create a building that performs as effectively as it was designed to.

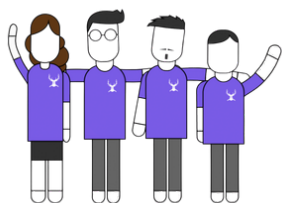
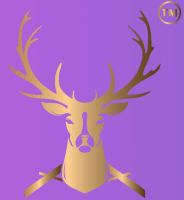
The exceptional airtightness result of 0.03 ACH highlights the value of careful detailing at every stage of construction and reinforces the importance of a continuous airtight strategy within modern building design.



Did you know?

Leaving a 1 pence-sized hole is the equivalent of leaving a window open all year.





Rated Excellent



NBS

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