INTELLIGENT MEMBRANES

PAUL & PAGE LTD

Paul & Page

THE DAIRY PASSIVHAUS PROJECT

PASSIVE PURPLE, PASSIVE PURPLE EXTERNAL, AIRTIGHT SEALANT & PASSIVHAUS BRICK SEAL

01223 208 174

Info@intelligentmembranes.co.uk

Building a Passivhaus from the Ground Up

The Dairy is a high-performance Passivhaus project designed to achieve exceptional levels of energy efficiency, occupant comfort and long-term sustainability.

Constructed to meet the demanding standards of Passivhaus certification, every element of the building envelope required careful consideration to minimise heat loss, control moisture, and eliminate uncontrolled air leakage.

To help achieve these objectives, a complete Intelligent Membranes airtightness and moisture management system was specified throughout the project.

Passive Purple, Passive Purple External, Passivhaus Airtight Sealant and Passivhaus Brick Sealer Cream were all utilised to create a durable, airtight and weather-resistant building envelope capable of supporting Passivhaus performance standards.

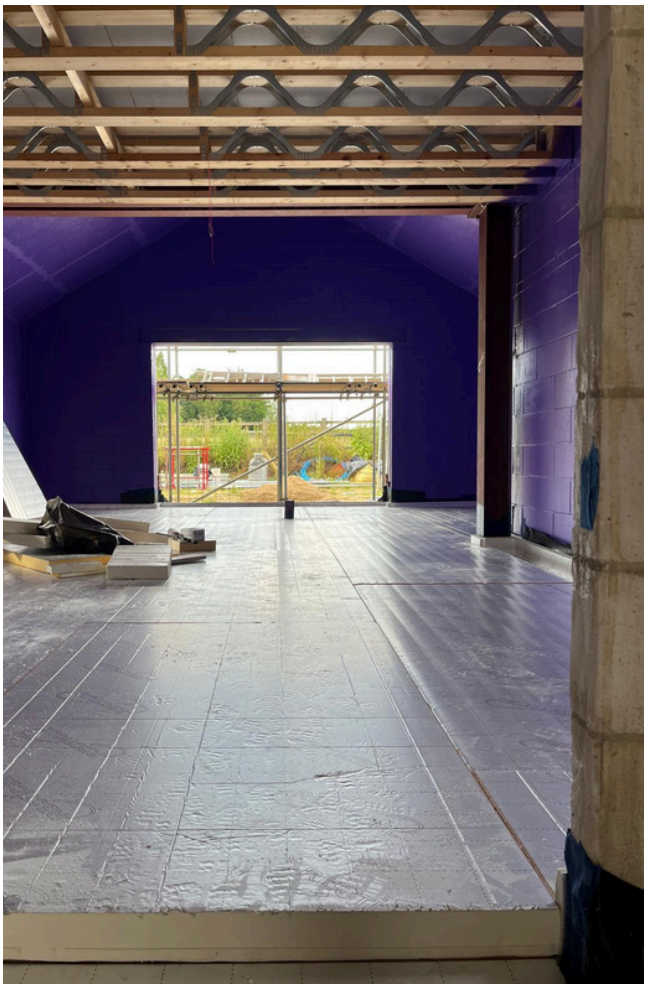
Airtightness Begins with Attention to Detail

Passivhaus buildings demand a continuous airtight layer throughout the structure. Even minor gaps around junctions, service penetrations and window interfaces can significantly impact performance.

Passive Purple Airtight Vapour Control Membrane was applied internally across walls, ceilings and structural connections to create a seamless airtight barrier.

Its liquid-applied formulation enabled complex details and difficult junctions to be sealed quickly and effectively, reducing installation complexity while helping maintain airtight continuity throughout the building.

Passivhaus Airtight Sealant was used around windows, doors, service penetrations and other critical interfaces to ensure every connection remained secure and airtight.



Creating a Building Envelope That Performs

While airtightness was a key objective, long-term durability and moisture management were equally important.

Passive Purple External was applied to external surfaces to provide a weather-resistant yet vapour-permeable protective layer. This helps prevent wind-driven rain penetration while allowing the building fabric to dry naturally.

To further enhance protection, Passivhaus Brick Sealer Cream was applied to the external masonry. The treatment improves moisture resistance while preserving the natural appearance of the brickwork, helping maintain the durability and performance of the façade for years to come.

Achieving Passivhaus standards requires rigorous testing throughout construction.

Multiple airtightness tests were undertaken during the build process, allowing the project team to identify potential leakage pathways and address them before completion. This proactive approach helped improve overall building performance while reducing the risk of costly remedial works later in the project.
The testing programme contributed to:

- Reduced air leakage
- Improved thermal performance
- Enhanced occupant comfort
- Greater energy efficiency
- Improved moisture control
- Support for Passivhaus certification requirements

By identifying and resolving issues early, the project team ensured the building envelope performed exactly as intended.

Site Manager Testimonial: Delivering Passivhaus Performance with Passive Purple.

"It's all about preparation and precision, and Passive Purple has been a game-changer for us. From airtightness to moisture control, these products have turned a painstaking process into something faster, more reliable and more effective. If Passive Purple can perform on a project as demanding as The Dairy, you know it's the real deal."
Nathan Page, Site Manager, Paul and Page Ltd

Practical Lessons from The Dairy Project

Throughout the construction process, several techniques helped improve installation efficiency and maximise performance.

Installation Insight: Achieving Consistent Airtightness Results

For intricate junctions and difficult-to-access areas, a 4-inch block brush proved particularly effective for working Passive Purple into corners, interfaces and complex details. This ensured complete coverage and helped maintain a continuous airtight layer throughout the structure.

Temperature Matters

Keeping products at room temperature before application improved flow characteristics and made installation more efficient, particularly during cooler periods.

Equipment Cleaning Best Practice

The site team found that cleaning equipment immediately with cold water helped maintain spray equipment and reduced clean-up time significantly.

Long-Term Masonry Protection

Passivhaus Brick Sealer Cream provided an additional layer of weather protection to the external brickwork, helping preserve appearance, durability and moisture resistance while supporting the long-term performance of the building envelope.

Why Passive Purple Was Selected

The project demanded more than a conventional airtightness solution.

Passive Purple was chosen because it combines airtightness, vapour control and smoke-tight performance within a single liquid-applied membrane. Its ability to adhere directly to masonry substrates made it particularly suitable for the challenges associated with deep retrofit projects.

The seamless nature of the coating allowed the installation team to maintain continuity throughout the building envelope, reducing the risk of uncontrolled air leakage while improving long-term durability. By creating a continuous barrier around the existing structure, Passive Purple helped prepare the building for its thermal upgrade and contributed towards the overall performance objectives of the project.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 22/6002

phA CERTIFIED COMPONENT Passive House Institute

RAKENNUSTIETO · EMISSION CLASSIFICATION · M1

Material Properties in WUFI® Database www.wufi.com

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

RADON BARRIER RN

PERFORMANCE GUARANTEE

TESTED | TRUSTED | GUARANTEED

INTELLIGENT MEMBRANES

Rated Excellent

Trustpilot

NBS Powered by Hubexo

Ecologi