

Exi-tite proud to deliver on Passivhaus school projects

7 months ago



Exi-tite is supplying energy-efficient Helios ventilation solutions with heat recovery for three of the first Passivhaus schools in Scotland, creating a healthy learning environment for a combined total of more than 5,000 students and staff.

The company became the first Passive House Institute (PHI)-certified ventilation distributor in Scotland last year, when Alan Gordon, Regional Director for Scotland, passed the PHI Tradesperson examination.

That level of expertise has led to Exi-tite delivering ventilation at Perth High School, Dundee East End Community Campus and Monifieth Learning Campus. All three projects can achieve efficiencies of 67kWh/m²/annum to meet stringent government targets.

Passivhaus (or Passive House) buildings deliver high levels of energy efficiency and comfort for users, alongside outstanding air quality through ventilation. Designed to maintain an almost constant temperature, they are constructed, insulated and ventilated in such a way that requires very little additional heating or cooling, other than from the sun and the activities of its occupants.

A total of 75 Helios Air1 XC units of varying sizes have been used across the three sites, all installed with Class 3 rectangular dampers to guarantee acceptable air leakage levels.

Alan Gordon said: “Exi-tite is proud to be involved in these prestigious projects and contributing to Scotland’s target of Net Zero with energy-efficient education sector buildings.

“Becoming a certified member of the PHI was key to understanding the guiding principles and requirements for Passivhaus MVHRs. The units were selected to meet the design requirements for the

classroom ventilation design strategy, with the necessary accessories to meet Passivhaus guidelines.

“The equipment was supplied within a 4-month period to meet the projects’ construction programmes and we will be carrying out the HRU controls set-up for all projects in 2025/2026.

“Exi-tite is involved in further Passivhaus projects in the UK and we look forward to supporting these projects to continue the progress on the path to Net Zero.”

Helios Air1 XC range

The Helios Air1 range delivers highly energy-efficient ventilation with heat recovery. The four unit series covers ceiling or floor-standing installation and includes more than 30 unit types in a volume flow range up to 15,000 m³/h. This ensures there is an option for practically all areas of application in more than 100 possible configurations. Helios AIR1 is supported by a wide range of accessories with different heating and cooling options, sensors and a multi-level filter concept.

The XC series as used in all three school projects provides a flow range of 500-3,200 m³/h from an extremely compact footprint using cross counterflow heat exchangers. Even where space is limited, an electric or warm water auxiliary heater battery can be easily integrated into the unit. The external cooling module can be directly mounted to the supply air inlets of the unit and thus also guarantees installation in confined spaces.

The units feature a built-in electric pre-heating coil as standard to protect the heat exchanger against frost at very low outside air temperatures. In case of increased comfort temperature requirements, an electric or hot water auxiliary heating coil can be optionally installed in the unit casing.

Perth High School

One of the first Passivhaus schools in Scotland and Perth & Kinross Council’s largest. Three storeys, with space for 1,600 pupils and up to 140 staff.

- Consultant: Atelier Ten
- Contractor: FES
- Main Contractor: Robertson Construction
- Size: 15,934m²
- Pupils: 1,600

Equipment supplied:

- 4x Helios Air1 XC 500
- 1x Helios Air1 XC 700
- 23x Helios Air1 XC 1400
- 1x Helios Air1 XC 2200
- 2x Helios Air1 XC 3200

Dundee East End Community Campus

With more than 2,500 students, Dundee East End Community Campus will replace two high schools to become one of the largest Passivhaus schools in Scotland.

- Consultant: Atelier Ten
- Contractor: FES
- Main Contractor: Robertson Construction
- Size: 26,666m²
- Pupils: 2,512

Equipment supplied:

- 5x Helios Air1 XC 1400
- 16x Helios Air1 XC 2200

Monifieth Learning Campus

Built to replace Monifieth High School and scheduled to open in Summer 2025, Angus Council funded the capital investment for this project, which is part of Phase Two of the national Learning Estate Investment Programme (LEIP). The council will benefit from Scottish Government revenue funding once the project is completed.

- Consultant: Hulley & Kirkwood
- Contractor: FES
- Main Contractor: Robertson Construction
- Pupils: 1,200

Equipment supplied:

- 1x Helios Air1 XC 1400
- 22x Helios Air1 XC 2200