

Flagship Willmott Dixon school wins Passivhaus award

2 years ago



The UK's first Passivhaus Plus school – completed by Willmott Dixon in 2019 – has won an industry award for setting the standard for zero carbon educational buildings.

Hackbridge Primary School in the London Borough of Sutton was named winner in the non-domestic category at the UK Passivhaus Awards 2023.

Designed by Architype for customer Sutton Council, the zero-carbon school generates more energy than the building consumes each year. It also integrates Passivhaus principles of airtightness and insulation to surpass RIBA's 2030 operational energy targets.

Described as a 'modernist version of a log cabin', Hackbridge is constructed from a lightweight timber frame and filled with Warmcel recycled newspaper blown insulation. It also has a green roof made up of a variety of plants including sedum, ferns and wildflowers to provide a natural canvas for the school's solar PV panels. As a result, it exceeds the LETI's 2020 embodied carbon targets, with the building using half the embodied carbon of a typical 'business as usual' building.

<https://www.youtube.com/embed/9eIBW6DaNt8>

To ensure optimum performance, Willmott Dixon has monitored the school since handover in October 2019 using its Energy Synergy™ approach to ensure energy is optimised and look at further ways to reduce carbon emissions. As a result, energy use has decreased by 10,000kWh/annum from its peak use, while energy generation has increased by 40,000kWh/annum from its lowest yield..

Doug Drewniak, Senior Building Performance Manager at Willmott Dixon, said:

“Hackbridge Primary School has been built to offer best in class energy efficiency and be fit for a changing climate, providing a comfortable temperature at all times of the year. Our ongoing monitoring and analysis of the school’s in-use energy performance is helping drive down the school’s day-to-day operating costs.

“I’m really proud of Willmott Dixon’s part in creating one of greenest, most efficient schools in the world, working in harmony with its natural surroundings creating an inspiring and healthy environment for children.”

Adam Whiteley, Senior Project Manager, London Borough of Sutton, said:

“This is a building that had to be an exemplar for zero carbon and sustainability. The project team rose to the challenge. The result is a beautiful school that celebrates our natural world and inspires children in their learning every day.” The UK Passivhaus Awards are hosted by the UK Passivhaus Trust and recognise buildings that meet the highest standards of energy efficiency, comfort, and sustainability. Willmott Dixon is a Patron member of the UK Passivhaus Trust, with Doug Drewniak a member of the Educational Steering Group.”

Key Stats: Hackbridge Primary School, Sutton.

- Number of occupants: approx. 244 (expandable to 420)
- Gross Internal Floor Area: 1865m²
- Treated Floor Area: 1510m²
- Project cost: approx. £9m
- Construction: Timber frame
- Construction started: June 2017
- Completed: 2020
- Certification: Passivhaus Plus, 2022