

News

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The Enterprise Centre achieves outstanding results on first Passivhaus test

The UK's greenest commercial building, The Enterprise Centre at the University of East Anglia, has passed its first airtightness tests with flying colours.

The Centre, which has been developed by the Adapt Low Carbon Group and delivered by construction, infrastructure and design company Morgan Sindall plc, with architects and Passivhaus designers Architype, has passed its first test with an amazingly low score of 0.31 ACH @ 50 Pa - almost half the requisite level of air leakage to achieve Passivhaus.

This level of airtightness is almost unheard of for a commercial building and only usually achieved anywhere after several testing sessions have taken place.

Work on the landmark scheme is nearing completion and the airtightness tests are a critical element in measuring how energy efficient the building is and how 'passive' it will be.

The rigorous tests measure how much air escapes from, or enters into, a building every hour. In order to be a Passivhaus development, a building can only lose or gain 0.6 per cent of its internal air volume in that period. The project team's primary aim is to ensure that any potential gaps in the building are sealed and that it is as airtight as possible.

Airtightness is crucial to the effectiveness of a Passivhaus building. The connections between the various components of the building, such as the floor-to-wall, wall-to-roof or window junctions, are often the areas where air leakage can occur, as movement between the different materials can lead to air loss.

John French, CEO of the Adapt Low Carbon Group and Project Director for The Enterprise Centre, said: "We're delighted with the building's performance in the recent airtightness tests. The Enterprise Centre has been designed to inspire, and it's fantastic to see it is already exceeding expectations.

"Passivhaus is really taking off in the region, with highly energy-efficient houses, schools and commercial buildings being built throughout the East of England. The vision for The Enterprise Centre is that it will become a focal point for green construction expertise, housing a variety of business tenants that specialise in this rapidly growing sector."

Gavin Napper, Morgan Sindall's area director, said: "This is a brilliant result to achieve in a building's first airtightness test, well above the results that we had hoped to achieve at this stage of testing. It usually takes a number of test runs to achieve the required score of 0.6, so to have smashed this result by almost half, on a commercial building of this scale on the very first test is truly remarkable.

"Although we have already achieved the required result for Passivhaus, we will still continue with the majority of the planned pipeline of tests. We're keen to see if we are able to lower the score any further and look forward to carrying out the final test once the building is complete."

Ben Humphries, associate director from Architype, said, "We are delighted that the extensive work that went into the design and detailing of the sealed envelope, and then the meticulous attention

by the whole project team during the construction period has paid off. It's a great result to get in an initial air test."

Well ahead of its opening, The Enterprise Centre is already proving to be a catalyst for change. Adapt has also set its sights on the Centre fostering innovation, stimulating smarter ways of working, promoting new industry standards and creating new supply chains.

The Enterprise Centre will include an innovation lab, 300-seat lecture theatre, flexible workspace, teaching and learning facilities and first class amenities to inspire and facilitate creativity and collaboration – an unparalleled working environment. By placing academic and commercial users side by side, it will encourage students to interact with businesses and be motivated to start their own enterprises.

The project is being supported by the UEA, the European Regional Development Fund, BBSRC and the Buildings Research Establishment. It is being managed by the Adapt Low Carbon Group and delivered by principal contractor Morgan Sindall plc.

The testing on the building was carried out by BSRIA (Building Services Research and Information Association) (UK). BSRIA is a non-profit test, instruments, research and consultancy organisation, providing specialist services in construction and building services.

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