

A tall, modern apartment building is shown under renovation. The building has a light-colored facade and blue accents around the windows. Scaffolding is visible on the right side of the building, indicating ongoing work. A semi-transparent white text box is overlaid on the right side of the image. The sky is blue with some clouds, and there are green trees in the foreground.

Leaders in Retrofit

ECD ARCHITECTS

ECD Architects are industry leaders in retrofit with a long history of reducing the energy use of buildings, making them more comfortable and rejuvenating them

We have experience of retrofit at all scales from individual homes, to large tower blocks, to strategic studies of whole estates of education buildings. As the need to decarbonise has gained prominence, we have helped many clients understand the practical implications of this. We have sorted larger estates of homes and of non-domestic buildings into archetypes, to reduce the number of buildings we need to look at in detail.

Creating energy models of these buildings allows us to clearly show where energy is being used, and make proposals to reduce this. We then work with clients to integrate the retrofit proposals with planned maintenance, informing long term planning and reducing additional costs. From this plan, we can establish whole life cost and carbon trajectories for phased retrofit solutions.

We have upskilled staff to give a strong cross-company understanding of how buildings use energy, as well as the specific requirements of PAS 2035 and PAS 2038. Our Retrofit Designers know what is needed to create compliant, buildable designs, and are used to working within these frameworks at scale.

The practical experience of delivering retrofits on site, with residents and building users in situ on many projects, feeds back into our work, ensuring that people are at the heart of what we do. This combination of technical understanding and design flair leads to retrofitted buildings that feel as good as new, but also look as good as new.

James Riley Point

ECD have designed a transformative retrofit for this east London tower block. Designed to the EnerPHit standard, reconfigured flats will have high levels of insulation, triple glazed windows and exhaust air heat pumps. Careful consideration of shading, overheating, balconies, and how to foster community led to the new external structure that dramatically improves the appearance.



Netherfield Estate

We worked with the contractor, Mears, to make a successful bid to the Social Housing Decarbonisation Fund to retrofit 302 homes on this estate. They are 1970s timber framed houses which are receiving external insulation, new windows and ventilation, improving both summer and winter comfort and dramatically reducing energy bills.

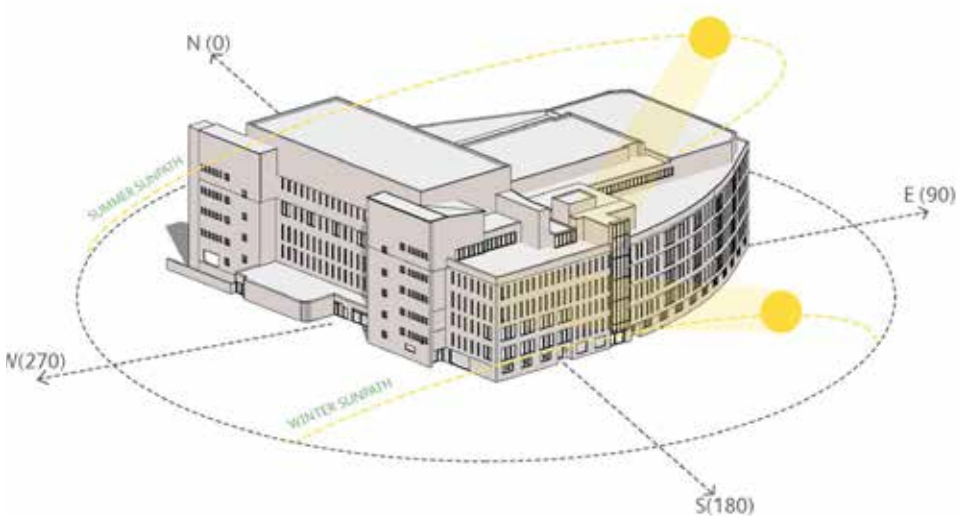


Affordable decarbonisation

In order to reduce carbon emissions, we need to use renewable energy to heat and power our buildings. For many buildings currently heated by burning gas, this could be an expensive change, as renewable energy is often more expensive. A key focus on many projects is to improve the building fabric so that less energy is needed overall, and what is needed can be provided with lower bills and lower associated carbon emissions.

University of Strathclyde, Climate Neutral Estate

The project investigated holistic solutions to tackle the climate emergency and provide the University with a carbon neutral, climate ready estate by 2040. This included Passivhaus EnerPHit feasibility studies on 11 buildings across the campus. These buildings ranged from the grade B listed Royal College, to the Technology Innovation Centre which was completed in 2015, with a variety of building ages and construction types in between.



Portsmouth City Council Retrofit Strategy

We analysed 17 house and flat types to create practically achievable retrofit plans that we integrated with the council's planned maintenance. The relative whole life carbon impact of retrofit, phased retrofit and new build was calculated and set out in clear graphs to enable the council to make good long term decisions.



Cambridge Retrofit

49 homeowners chose to be part of this pilot study, creating warmer, mould-free homes that are as close to net zero operational energy as possible. Detailed modelling of the energy balance of each home enabled an appropriate specification that achieves the project aims, and the homes are being monitored pre & post retrofit to confirm the outcomes.





LONDON

Unit C,
65 Hopton Street
London SE1 9LR

T: +44 (0) 20 7939 7500

GLASGOW

The Centrum Building,
38 Queen Street,
Glasgow G1 3DX

T +44 (0) 141 204 7855

PRESTON

Old Docks House
90 Watery Lane
Preston PR2 1AU

T: +44 (0) 1772 342 740