

FIRST LOOK

Waugh Thistleton halves CO2 emissions of office building in east London

30 JULY, 2019 BY FRAN WILLIAMS AJ

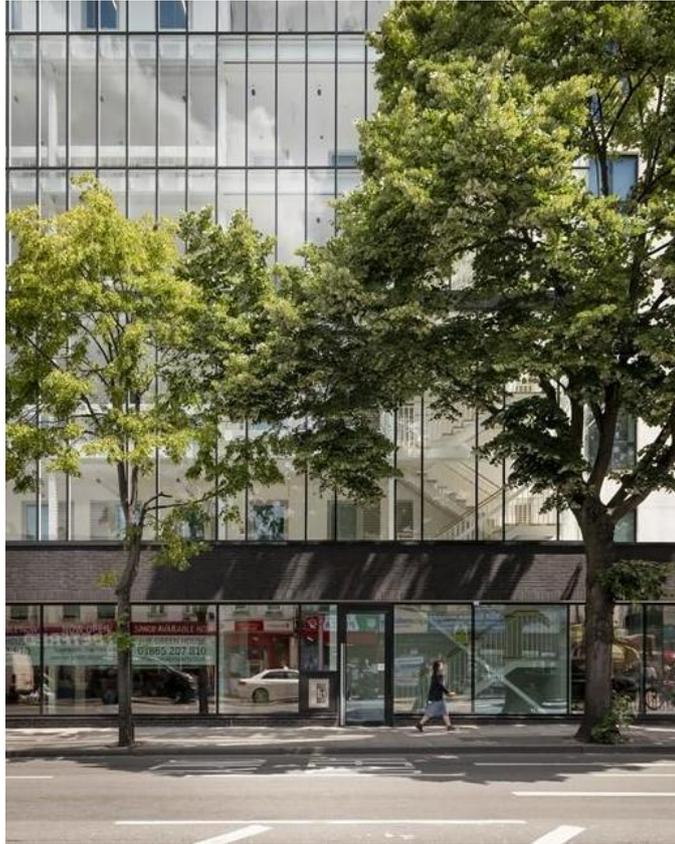
All photos source: Jim Stephenson



SKELLY & COUCH



SKELLY & COUCH





Waugh Thistleton Architects has added CLT extensions to an existing concrete frame structure to create new building for the Ethical Property Company

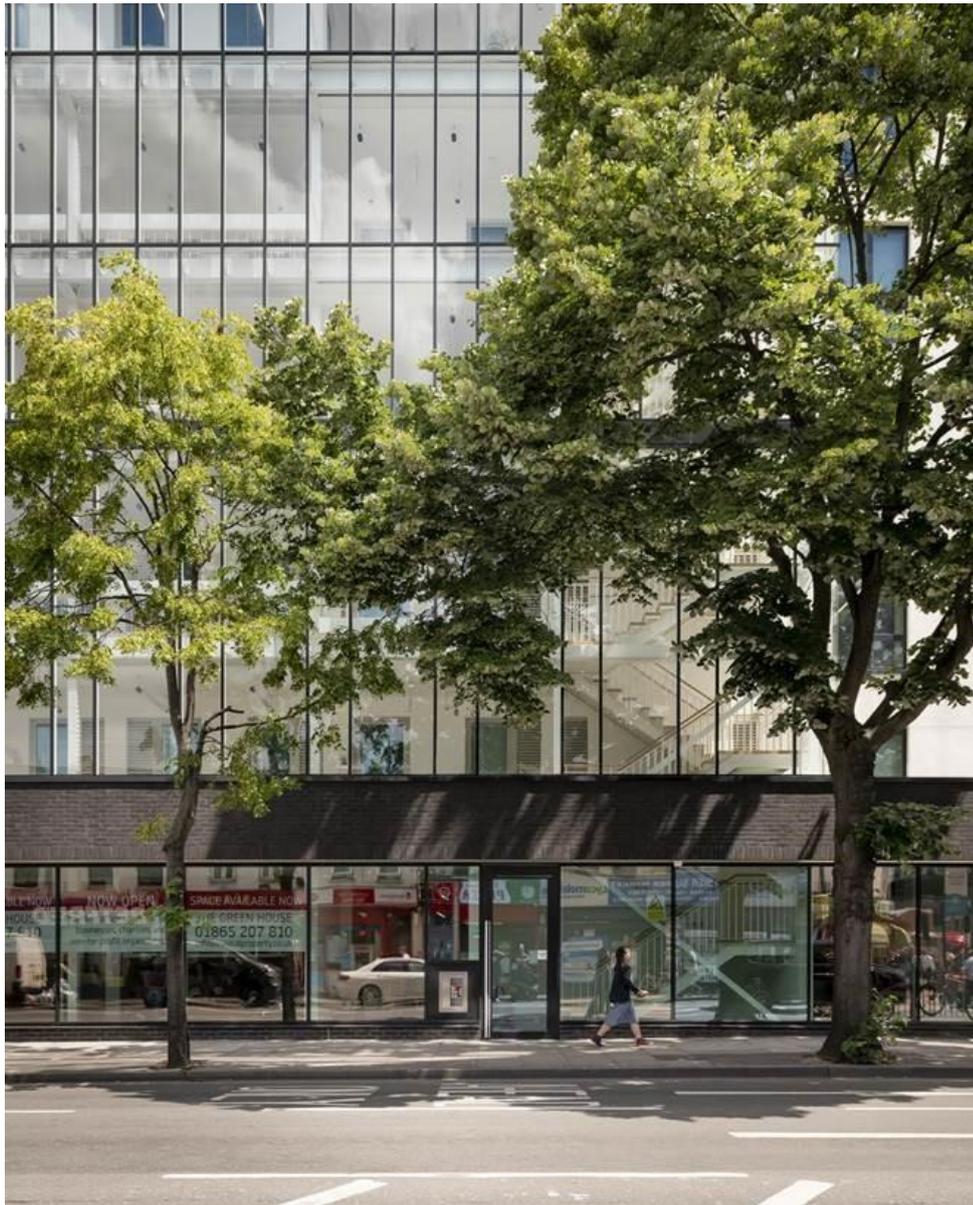
Waugh Thistleton has completed work on the Green House, an environmentally friendly office building in Bethnal Green. The sustainable six-storey commercial property is a retrofit of a derelict 1960s office block and is now a flexible workspace for up to 50 social change organisations.

The concrete frame was retained in order to minimise waste, pollution and reduce carbon emissions that usually occur through demolition. Waugh Thistleton added a new six-storey rear extension and atrium to provide 7,050m² of useable office space, with further workspace located in a single-storey rooftop extension. All additions have been built from prefabricated CLT and glulam, reducing the building's carbon footprint.

The west façade, which faces on to Cambridge Heath Road, is predominantly glazed, providing passive regulation of noise, heat, sunlight and ventilation. The windows are set back from the external skin of the facade to provide solar shading and acoustic protection; this also gives a layered effect to the front of the building.

PVs on the roof offset energy consumption and wildflower green roofs are located at second and sixth floor levels to encourage biodiversity.

SKELLY & COUCH



A large south-facing communal terrace on the fourth floor provides outdoor breakout space for informal meetings, while there are also over 80 bicycle parking spaces to encourage commuting by bike.

At the centre of the building is a full-height atrium which opens up the lobby space at ground floor, brings in natural light and provides sky views from every level in the stair core. The central exposed CLT cantilevered staircase is the key connection between the existing concrete building and the timber extension. The cantilever has been engineered using resin-bonded steel rods inserted into the treads, with the half-landings suspended from a steel tension system.



On every floor, open-plan kitchens encourage active collaboration. Recycled carpet tiles, low-energy lighting and water-saving technologies all contribute to reduce volatile organic compounds (VOCs), and electricity and water consumption. The building halves CO2 emissions in use from the notional benchmark of 91.7 tonnes per year to 45.8 tonnes per year.

Architect's view

Our commitment to championing environmentally friendly building practices is perfectly aligned with Ethical Property's own longstanding approach to sustainability. Creating workplaces out of CLT offers huge benefits both to the client, in terms of the cost and efficiency of the programme, and also the end users in terms of a warm and comfortable work environment.

Andrew Waugh, director, Waugh Thistleton Architects

Client's view

Since we started 20 years ago, our policy has to be to always ensure our centres are as environmentally friendly and sustainable as possible. With the Green House we were very lucky to have found an architect with the same values as us, who has designed a wonderful space that embraces sustainability.

Conrad Peberdy, managing director, Ethical Property Company

Project data**Start on site** September 2016**Completion** November 2018**Gross internal floor area** 7,049m²**Form of contract** Design & Build**Construction cost** £16 million**Architect** Waugh Thistleton Architects**Executive architect** Veretec**Client** Ethical Property Company**Structural engineer** Ramboll**M&E consultant** Skelly & Couch**QS** Leslie Clark**Planning consultant** CMA Planning**Main contractor** ARJ Construction**CAD software used** Vectorworks**Annual CO₂ emissions** 45.8 tonnes/yr