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1 Courtyard elevation of the Wolfson Flats at Churchill College after its rehabilitation.
2 Before renovation.



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FAMILY FRIENDLY

Troublesome and outdated family graduate accommodation at Cambridge's Churchill College has been given a careful reworking by 5th Studio

Words Pamela Buxton Photography Tim Soar

There are plenty of notable buildings at Cambridge's Churchill College, particularly Richard Sheppard Robson & Partners' original development. But it's fair to say that the Wolfson Flats, a rare development of family graduate accommodation, wasn't considered to be among them when the college asked 5th Studio to rework the 40-unit development.

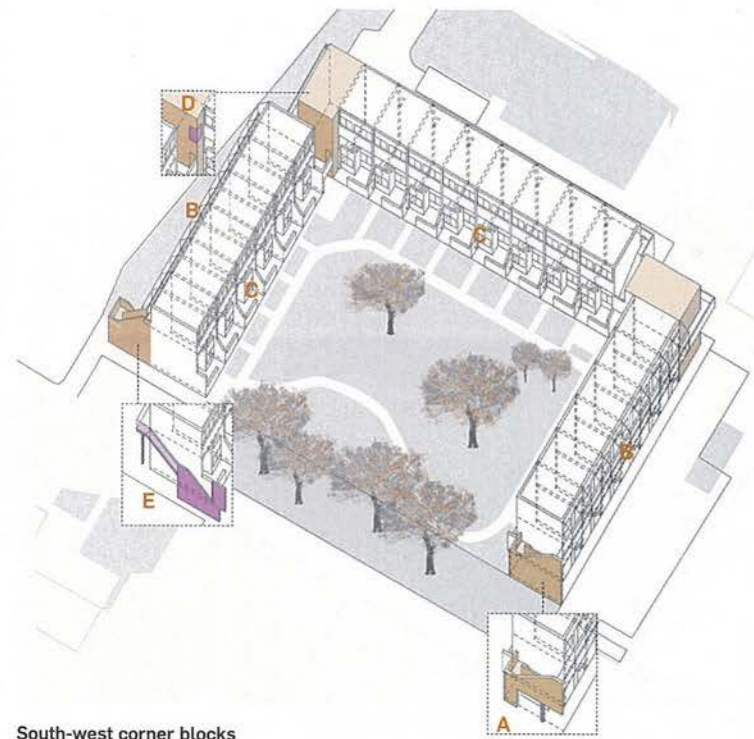
Designed in 1965-7 by David Roberts, the flats were viewed as troublesome. Arranged on three sides to form an open courtyard, they provided accommodation that was too small, inflexible and damp, and was beset with lack of insulation and high energy bills. Inexplicably, a community room was designed without any windows, and while graduate students with partners or families were grateful to find accommodation on campus, the flats were clearly no longer fit for purpose.

After a three-year, £3.4 million phased reworking, the story is now very different, providing a good example of how sub-standard accommodation can be sensitively rehabilitated on a budget without the disruption or expense of wholesale redevelopment — something that is likely to be increasingly appealing to higher education establishments amid the current uncertainty over funding.

Demolition was considered, but architect and client decided that a retrofit would be more sustainable, more economical, and more in keeping with the edge of conservation area location. The open courtyard arrangement enclosing a safe family garden and the pleasant outlook over the green campus remained successful, but there were three main areas that needed attention: the configuration of the flats and their servicing; the meagre nature of the

circulation areas both inside and out; and the failing fabric of the sixties blocks. The three-storey accommodation consists of 20, two-bed maisonettes on the lower two levels and 20 one-bedroom flats on the upper level, constructed with poorly insulated brick cavity walls, concrete floors and a flat roof. A walkway runs around the development at the rear to provide access to the upper flats.

The living accommodation suffered from being dark and cramped with small, separate kitchens, and studies that were unsuited to today's more open-plan living styles. 5th studio reconfigured them and introduced sliding walls between the main spaces to increase flexibility. In the upper flat, the kitchen now flows into the dining area, and the study is combined with the bedroom. The biggest changes were made in the maisonettes, where internal space has



- South-west corner blocks**
- A Reworked end of terrace staircase
 - B Redesigned rear canopy
 - C Remodelled courtyard elevations
 - D Community room with new window
 - E Staircase repositioned

1 The south-west corner before the redesign, with a staircase that blocked off the rear of the buildings from the street. 2 The same corner after the redesign. The staircase has been repositioned to open up the rear elevation.



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increased from 61.2sq m to 72.7sq m by extending into the courtyard to create a larger main room. Upstairs, the previously tiny second bedroom can now accommodate two children – before there was only room for a bed and a wardrobe. There is still a separate study but this is now glazed. The brick balcony has been replaced with a glass front to allow more light into the main bedroom, and a window seat has been created.

The extension gave an opportunity for a new elevation composition that broke with the wholly brick original by introducing cedar cladding. The architects had wanted to re-use the original brick in a vertical strip up the entire elevation but this proved impractical. Instead, the highly insulated additions are clad in cedar to clearly signal the new intervention with just a small patch of bricks to the side of each unit that emphasises the rhythm of the units. At the rear, cedar is used to clad the upper storey.

A key move was reworking the staircases at the entrances to the site to immediately improve access. The monolithic brick structure on the south-west stretched across to box in the rear of the flats, blocking off light and easy pedestrian access to the front doors. Likewise on the east

side, the staircase block cut across the pavement so that parents pushing buggies had to walk in the road to get around to the side of the building. This was solved by relocating the staircase to sit against the accommodation and removing the protruding wall, immediately opening up the rear site to the road. On the south-east, the stair is supported on a new column at ground floor level to allow pedestrian thoroughfare. The second-floor walkway has a new canopy to replace the corrugated plastic one and reworked in cedar with stainless steel mesh balconies which are less oppressive than the original solid ones.

One of the most effective interventions has been to create a large corner window over the courtyard in the previously windowless community room; in one stroke creating a brighter space where parents can more easily keep an eye on children playing in the communal garden below.

To tackle thermal performance, the rear building was externally insulated on both the elevation and the walkways, and new double-glazed windows were installed, the deeper walls giving the opportunity for reveals that animate the rear facade. Each flat has its own MVHR

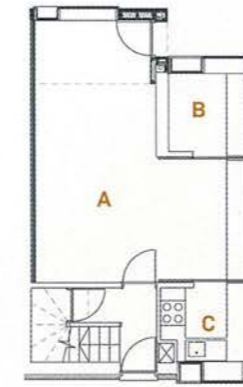
(mechanical ventilation with heat recovery) system, underfloor heating and a new shared hot water distribution system, with the central plant supported by solar panels on the new roof. Anecdotally, energy bills have drastically reduced.

Certainly the purity, however unwelcoming, of the brick original has been lost. But there have been many gains for those who live there and the flats have been given a new lease of life that should sustain them for a good few more decades.

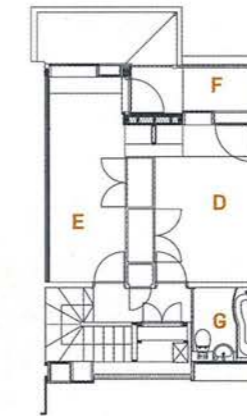
“It was a troublesome building, a problem for the college,” says project architect February Phillips. “Now they’re really proud of it.”

PROJECT TEAM

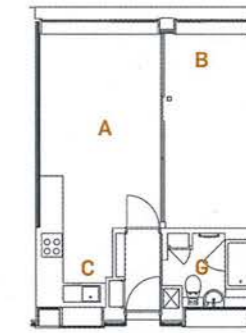
- Architects**
5th Studio
- Structural engineer**
Scott Wilson/Cambridge Architectural Research
- Services engineer**
Roger Parker Associates
- Planning supervisor**
Donatus Eduputa
- Contractor**
Cocksedge Building Contractors



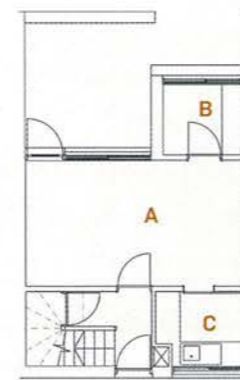
New ground floor maisonette



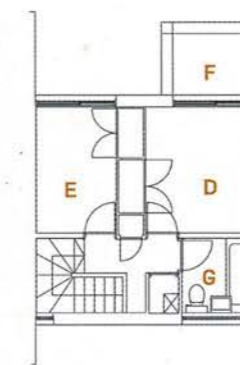
New first floor maisonette



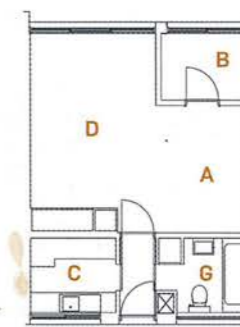
New second floor flat



Old ground floor maisonette



Old first floor maisonette



Old second floor flat

- Floor plans**
- A Living Area
 - B Study
 - C Kitchen
 - D Bedroom 1
 - E Bedroom 2
 - F Balcony
 - G Bathroom



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3 Glass-fronted balconies give better views through the maisonettes into the internal courtyard. 4 Reworked south-east corner, showing the walkway with a new canopy and mesh balustrade. The brick elevation has been overclad to improve insulation.