

Winner

Ash Court, Girton College, Cambridge

Entrant: Allies and Morrison Architects

One of the most energy-efficient student housing buildings in the UK, Ash Court, has been designed by Allies and Morrison Architects with a 100-year design life to future-proof against climate change.

The brick-clad, three-storey wing provides 50 en-suite study bedrooms at the Grade II* listed Girton College. The architects decided against a curtain walling system and instead used a super-insulated envelope with triple-glazing and powder-coated Schueco AWS 90.SI aluminium window profiles. These were combined with louvres, brise soleils, pvs and cills, supplied by Anglian Architectural.

On the north-east elevation, for each bedroom unit a fixed main window is combined with a louvred panel in front of an insulated vent. Windows on the south-west are shaded with brise soleil on a secondary framing system. Air tightness was given a

particularly high priority resulting in a rate of 1.83m³/m²/hr.

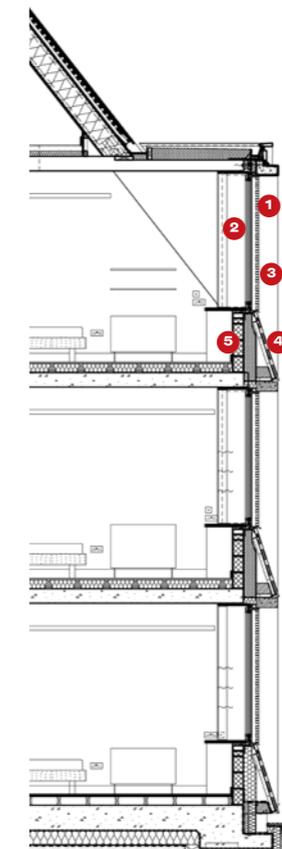
Window sensors automatically disable the heating when air quality is satisfactory. In anticipation of increased future cooling requirements, pipework was embedded into the concrete soffit to enable cooling with ground water. Some 190m² of photovoltaics were incorporated into the steeply-pitched roof, generating 40% of electricity on-site.

The building achieved a 40% reduction in CO₂ beyond Part L2A (2006), and was rated BREEAM Excellent.

'It's still very rare to combine high architectural ambition with passive techniques,' says judge Sunand Prasad. 'Allies and Morrison have used those techniques skillfully to make lots of light and simplicity, with a very sophisticated typological approach.'

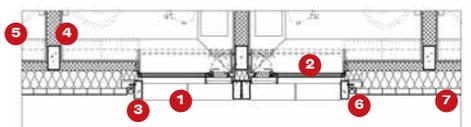


Above Gable end. Concrete frames the window ensemble and terracotta cladding.
Left North-east elevation. Each bedroom has a fixed main window alongside a louvred panel in front of an insulated vent.



Bedroom window section (left) and bedroom window plan (below)

- 1 Reveal, louvre and fin
- 2 Bedroom window
- 3 Pre-cast concrete 'goalpost'
- 4 Terracotta sills
- 5 Insulated blockwork
- 6 Downpipes
- 7 Masonry wall



Client: Girton College
Architect: Allies and Morrison Architects
Structural engineer: Fluid Structures
Services engineer: Max Fordham
Main contractor: Mansell
Specialist contractor: Anglian Architectural

Ash Court was also commended in the Education category (see page 9).

PHOTOGRAPHS: NICK GUTTRIDGE