Photo: Winvic Construction

Students get high-rise living

Topping out at 23-storeys high, a steel-framed student accommodation project is now Coventry's tallest building. Martin Cooper reports.

Coventry is famous for many things, but until recently high-rise buildings was not one of them.

That has now changed since last summer's completion of a new landmark 23-storey student accommodation scheme, which is now the city's tallest building, excluding the nearby cathedral spire.

Towering over the city centre, the Fairfax Street scheme for specialist student accommodation developer CODE Students has delivered 1,192 self-contained studios and achieved a 'Very Good' BREEAM rating.

Overall the scheme consists of four interlinked steel-framed blocks, ranging in height from the eight-storey Block C to the tallest element, the 23-storey high Block B. Meanwhile, Block A has 14-storeys and Block D tops out at 21-storeys, technically making it Coventry's second tallest tower.

According to the client CODE Students, the en-suite studio flats have been purposely built to provide great student housing as they feature everything a tenant would need.

All of the units feature a fully-equipped kitchen, deluxe shower room, a double bed, 200mb broadband and a secure CCTV and fob entrance system. Other features include a spacious wardrobe and relaxing leather chair/sofa, a personal workspace with desk and comfortable office chair.

"We're just a few minutes' walk from Coventry University, as well as offering city-based living for those studying at the University of Warwick," says a spokesperson for CODE Students.

This is the highest project main contractor Winvic has ever built as

The high-rise steel-framed buildings are now a city landmark

FACT FILE
Fairfax Street Student Accommodation, Coventry
Main client: CODE Students
Architect: RG+P
Main contractor: Winvic Construction
Structural engineer: PRP
Steelwork contractor: Caunton Engineering
Steel tonnage: 1,800t

Steelwork aided the project's fast construction programme

the company is primarily known for constructing distribution centres. However, the company is now diversifying and previously completed a similar job for the client in Leicester, although that was low-rise compared to this scheme as it only had eight-storeys.

Winvic started work on site during October 2017, and began by installing piled foundations in readiness for the steel erection to begin. The plot had previously been used as a surface car park and the client had already remediated the site before the main contractor started.

The choice of a steel-framed solution for the scheme was made primarily for the material's speed of construction.

The client wanted the accommodation completed as quickly and efficiently as possible. Consequently, the team went with a steel frame construction with metal decking as it offered the fastest method.

This design decision proved to be the correct one as after only 11 months on site 315 bedrooms were already completed. Block A and a portion of the adjacent Block B, were handed-over in September 2018, just in time for the new University term.

By the following month (October), steelwork contractor Caunton Engineering had competed the majority of its programme, having erected Blocks A, B and D, and then completing Block C.

RG+P Architect Laura Davison says: "The exterior of Fairfax Street features a number of large 'fin' extensions as well as deep recesses and reveals. These create shadows, texture and make the overall impression of the buildings much more dynamic. Steelwork offered the flexibility to be able to deliver this design intent within the time period and to the desired quality."

The final piece of the steelwork jigsaw was then completed in February 2019 when Caunton returned to site to erect 26t of steel that formed a single-storey podium deck situated in front of Block C. This accommodates ground floor retail units and a landscaped private garden on the first floor.

Caunton Engineering were employed on a design and build contract for the scheme. The company's Senior Structural Engineer Colin Winter says: "Although there are four blocks and a podium, much of the steelwork was fairly straightforward and repetitive as each of the accommodation blocks have identical floor plans."

The four accommodation blocks have widths between 13m and 15m, with only one internal column line. These members are offset from a central line, allowing them to be positioned one side of the corridor that separates two rows of bedrooms on each of the block's floors.

Meanwhile, perimeter columns are generally set at 6m or 7m intervals, with stability for the frames derived from full height vertical bracing systems.

The bracing forms steel cores around stairs and lifts, which are located in the two tallest towers, Blocks B and D.

"The entire scheme is essentially two large steel frames, separated by a movement joint between Block C and B," explains Mr Winter.

The regimented tower block grid lines even include non-bedroom areas such as the ground and first floor areas which will accommodate retail and student communal areas.

Some of these areas will be subjected to higher loadings and so larger beams, measuring 350mm × 300mm, have been installed at first floor level in Block A where a student gym will be located.

The entire Fairfax Street accommodation scheme was handed over during the summer of 2019.