

Apollo Court, Greek Street, Liverpool



Project Data

Client:

The UNITE Group

Architect:

Hadfield Cawkwell Davidson

Structural Engineer:

The BWB Partnership

Contractor:

Balfour Beatty Construction

Modular Manufacturer:

UNITE Modular Solutions

Liverpool is home to some 32,000 students and UNITE's new development at Apollo Court in the city centre is helping to address the significant demand for quality accommodation. The new building provides 221 en-suite bedrooms arranged in cluster flats within three adjoining blocks, and includes 13 studio apartments.

Due to the sloping nature of the site and the requirement for the ground floor windows to be elevated above the adjacent footpath for privacy, the foundation solution comprised of mass concrete pad foundations, supporting a grillage of steel beams located under the modular load bearing walls.

The modular building comprises five storeys of en-suite bedroom modules together with communal kitchens, studios and corridor cassettes.



A steel framed structure with pre-cast concrete floors was used for the core areas containing stairs and storage

areas. A steel frame structure at ground floor level in the reception and service area supported the modular construction from first floor upwards.

The planned shape of the modular block required a proportion of the lateral wind load to be transferred to the steel framed cores to assist in providing lateral stability in the transverse direction.

The elevations were clad in masonry for the bottom four storeys with lightweight cladding utilised on the top storey. The masonry ties and window details were designed to accommodate the thermal movement within the external masonry cladding that negated the requirement for brickwork support angles.

Dibsba lightweight metal trusses used at roof level to span between load-bearing modular walls supported cold rolled purlins and a standing seam roof.

All steelwork supporting the modular construction had to be installed to a tolerance of +/- 3mm and the deflection of the steelwork supporting beams was limited to span/500 subject to the total load from the modules above.

Balfour Beatty Construction - UNITE's partnering contractor for the region, installed the 208 bedrooms and 36 kitchen dining room modules in 25 days, with installation specialists Quadro regularly achieving 14 modules per day.

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