



A HYBRID APPROACH TO HOUSING

solid timber frame development in Shoreditch demonstrates a harmonious mix of clever planning, great design and modern construction methods – all within the confines of an urban infill site

If all goes to plan, the roll out of the Thames Gateway will provide the catalyst to enable manufactured and offsite construction to become mainstream industry practices.

But there is one nagging problem – many of the mass modern methods of construction (MMC) houses built late look awful. The technology may be exciting and innovative, but as homes to live in they are too often bland and soulless. With some notable exceptions – especially MMC-based entries in English Partnership's Design for Manufacture competition – they are precisely what the Thames Gateway must resist at all costs. It is also widely assumed that MMC and fabrication are only viably employed when there is sufficient scale to allow significant repetition.

But the Fairmule House development in Shoreditch, east London, which is currently nearing completion, demonstrates that MMC developments can embrace exemplary

planning and good architectural design, while remaining viable on the scale of a relatively modest urban infill site.

Fairmule House is a part-four-storey, part-five storey, 1,070 sq m mixed use development, with business units on the lower floor and rental apartments above. When local developer Aqua Properties commissioned architect Quay2c, the site already had planning permission – but the proposed scheme was, in Quay2c director Ken Taylor's view, "not the best".

The problem was not just how the building looked, but also how it functioned.

Taylor describes the 23.5m by 14.5m plot as a classic urban brownfield site – it was a derelict car park facing on to a narrow street with a small park to the rear.

Under the original scheme, the 11 apartments were all single aspect. Largely this was because the building had a single entrance. It was truncated front to rear by dark, windowless and unventilated corridors on each floor. ▶

The Thomas Fairchild story

The building is named Fairmule House after Thomas Fairchild, whose grave is in the park behind it. Fairchild was the first man to genetically modify plants, successfully combining a sweet william and a carnation to produce the "Fairchild mule" hybrid.

"As with all our projects we looked closely at the grain and history of the area and have used the theme of gardens and hybrids to think through the design of the building," says architect Ken Taylor.

Most obviously this influenced the choice of the solid timber structure, but also in how the development uses natural light.

"We had a strong desire to have lots of glass to the southern street side of the project," adds Taylor, "while galvanised steel panels recall garden watering cans and green window frames animate the front façade".

At street level glass signage panels will incorporate microscopic images of carnations along with black species plaques found in botanical gardens. A digital cross breed between carnations and sweet williams will occupy two upper areas of glazing to give a "flowering of light" when the sun shines into the two common staircases.

The back elevation is clad in western red cedar shingles with recessed balconies enabling residents to enjoy the view. The glass balustrades will have abstracted images of the sweet williams laminated into them.

The top storey on all sides and the western party wall uses a fibrous cement weatherboard, imprinted with wood grain as a fire resistant finish. The roof is a green blanket of sedum with insulation below sitting on the solid timber roof.



Quay2c's approach was to rethink how the building worked; so instead of wasting space with the internal corridor, it added a second naturally lit stairwell, providing access to all the apartments directly from one of the two sets of common stairs. In effect the outside pavement became the resident's common social realm, and this encourages horizontal circulation in the street rather than in dark corridors.

This reconfiguration meant that all the flats could have a double aspect. Bedrooms, all but one including balconies, are positioned to the rear overlooking the park, and living space is at the front overlooking the street. Whereas the original scheme comprised eight single and three double-bedroom flats, the new layout accommodates six doubles and five singles.

The building is made from German sourced laminated and glued solid softwood panels. This panelised glulam forms the walls, roof and floors, all screwed together on site to create a building that is

structurally self-supporting.

Quay2c chose the solid timber system for environmental reasons, but also because of the speed of construction – the building was structurally erected in just six weeks. The panels are also highly engineered to offer exceptional tolerances and provide good thermal and acoustic properties in what is a relatively thin-wall construction (wall panels are 115mm thick, and floor and roof panels 170mm thick).

Quay2c worked with Eurban, which is a design and build company specialising in solid timber construction. Taylor says he has no concerns over the longevity of the system – and believes the way the structure is assembled makes it less vulnerable to variable workmanship. He points out that Germany has more than 20 years' experience using this well proven, robust construction system.

When complete the £1.5m Fairmule House development will be the largest solid timber building in the UK. ■



Quay2c added a second naturally lit stairwell, providing access to all the apartments directly from one of the two sets of common stairs, encouraging horizontal circulation in the street rather than internal corridors. Reconfiguration allowed bedrooms to be positioned to the rear overlooking the park, and living spaces at the front to overlook the street. And whereas the original scheme was just three double and eight single-bed flats, the new layout accommodated six double and five singles.

Client: Aqua Properties, London.
Architect and designer: Quay2c, London.
Structural engineer: Anders Associates, Sutton, Surrey.
Mechanical and electrical engineer: Brinson Staniland Partnership, London.
Planning supervision, health and safety: Safetrack Associates, Bristol.
Groundworks contractor: Westwood, Loughton, Essex.
Solid timber structure design and build contractor: Eurban, London.
Main contractor fit out works: LI Construction, Ilford, Essex.

