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Information Sheet

Fairmule House, 23-35 Waterson St, Shoreditch, London E2 8HE.

As seen on ITV London Tonight News 12th June 2006. London District Surveyors Association (LDSA) Sustainable Building of the Year 2007.

Fairmule House is currently the biggest solid timber mixed use building in the UK. Instead of employing steel or concrete for its main structure this project uses solid timber laminated panels for its walls, roof and floors that are simply screwed together. The building has many other sustainable features in addition to bespoke public artworks incorporated into its fabric.

Background

Multi disciplinary design practice Quay 2c were approached in February 2004 to project manage the construction of 11 flats and 7 business units that a developer client had bought with planning permission. The 23.5 x 12-14.5 metre deep plot, in a connecting street between Hackney Rd and Kingsland Rd, was a classic brownfield site being used for car parking, south facing to the narrow street and with some mature trees in a small park to the rear. Being design based, Quay 2c were unhappy with the look and layout of the existing scheme, which included 3 double bed flats and 8 singles. All these were single aspect, served by a lift and a dark, unventilated corridor in the middle of the building.

Planning

The client asked Quay 2c to look at alternative layouts that was supported by Hackney Planners provided the same "envelope" of development as the previous part 4 storey, part 5 storey scheme was kept. An application was duly made and approved on delegated powers for 11 double aspect cross ventilated flats (6 double beds and 5 single beds, all but one with balconies or terraces). Bedrooms were positioned to the rear and living spaces to the street, all accessed from two naturally lit common staircases encouraging horizontal circulation in the social realm of the street rather than in the dark corridor of the previous scheme. To the Ground and First floor seven varying sizes of business units were introduced, (most of which are double aspect) encouraging a greater diversity of uses to compliment the flats above.

The Thomas Fairchild Story.

As with all their projects Quay 2c looked closely at the grain and history of the area and found that the park to the rear was an overspill graveyard from the main church on Shoreditch High St. One of the few graves left there is that of Thomas Fairchild. He was one of the many market gardeners in the area supplying the new urban gentry of the City and Bloomsbury in the late 17th and early 18th century. The building of the amazing Columbia Rd market hall, now demolished, in the mid nineteenth century and the current flower market nearby are remnants of this history. Fairchild was famous for being the first man to genetically modify plants combining a Sweet William and a Carnation to manufacture his famous "Fairchild Mule" hybrid.

Fairmule House.

As a consequence, the new building has been named Fairmule House. Quay 2c, who have an artist, Julia Manheim as a director, used the theme of gardens and hybrids to think through the design of the building.

Solid Timber Structure

The Thomas Fairchild theme to this project concurs well with Quay 2c's long standing interest in sustainable issues and their aesthetic. That the natural world could be the source for the superstructure of the building, was supported by Eurban, a new design and build company to the UK specialising in Solid Timber construction. They use sustainable laminated softwood panels to construct walls, (115mm thick) floors (170mm) and roof (170mm). The first panel to be craned onto site was 2.7m wide by 14m long by 115 mm.

The advantages of the Solid Timber Structure system are: -

- 1) Speed of erection. 6 week contract period.
- 2) Carbon neutral sustainability.
- 3) Super tolerances on highly engineered panels.
- 4) A solid feel and good on acoustics.
- 5) Very good on heat losses through relatively thin walls.
- 6) Government "Modern Methods of Construction" (MMC) agenda well served.

Street side

Light is a magic ingredient for all things to grow, and so there was a strong desire to have lots of glass to the southern, street side of the project which gives good passive solar gain, reducing energy costs. A matrix of galvanised steel panels, recalling garden watering cans and containers, complimented by green window frames animates the front facade. As carnations are the more tightly structured of the two plants Fairchild cross-bred these were appropriated to the urban side of the building.

Garden side

The back elevation is clad in western red cedar shingles with recessed balconies to enjoy the view. The glass balustrades have abstracted images of the more open structured Sweet Williams laminated into them.

Between

The top storey and the party wall has a fibrous cement weatherboard imprinted with fake wood grain as a fire resistant finish.

Other Green Features

Roof: A green blanket of sedum with tapered insulation below sitting on the solid timber roof.
Windows; Double glazed with super low "e" glass from Denmark. They are a composite hybrid of low maintenance recycled aluminium to the outside and warm laminated softwood to the inside.
Ventilation; Passive stack ventilation system is used to vent all bathrooms and kitchens. Hence you can see some "chimneys" to the roof. With openable windows both back and front, natural cross ventilation controllable by the users is provided.
Heating; The building uses underfloor heating that employs polyurethane pipes that pump low pressure hot water around the system. This radiates heat through ceramic tiles rather than the usual thicker concrete screed. Supplementary metal plates between the tiles and the wood fibre insulation boards the pipes sit in, compliment the heat output .

Public Artworks by Quay 2c

House Signs; Street level glass signage panels incorporate microscopic images of carnations laminated into the glass.
Botanic Signs; Variations of black species plaques found in botanical gardens tell the story of the building to the street.
Staircases; Digital cross breeds between carnations and sweet williams occupy the two upper areas of glazing to give a flowering of light and colour when the sun shines.
Garden side; The seven glass balustrade panels read "Fairmule House" along with Sweet William images.

Area & Costs

The building is 1067m² part 5 storey, part 4 storey with one lift serving all business units. The overall cost was around £1.6 million. The solid timber structure with its fast quick erection times was viewed by the client to be competitive with a steel or concrete structure.

Team

Client; Lint Group, London.

Architects & Designers; Quay 2c, London. www.quay2c.com

Structural Engineer; Anders Associates, Sutton, Surrey.

Mechanical & Electrical Eng.; Brinson Staniland Partnership, Bromley, Kent. www.bspce.com

Planning Supervision Health & Safety; Safetrack Associates, Bristol.

Groundworks Contractor; Westwood Ltd, Loughton, Essex.

Solid Timber Structure Design and Build Contractor; Eurban, London. www.solidtimber.co.uk

Main Contractor Fit Out Works; L.I. Construction, Part of the Lint Group, Ilford, Essex.

'Other highlights of the Prefabulous Show include the brilliant all-wood Fairmule house scheme'
Fay Sweet - Evening Standard Home and Property January 2005