

Structerm | Fastbuild[®]

**Thornhill Primary
School**
Rotherham

Sector: Education



Client:
Rotherham Schools Joint Venture

Building type:
2 Storey Education Building

Project size: 1604m²

Supply Package:
Fastbuild walls, floors, stairs & insulated render

Build time: 26 weeks (for all elements)

Overview::

The Structerm Fastbuild system has been used by Balfour Beatty Construction to complete the first school under the PFI agreement for Rotherham Metropolitan Borough Council. The building system was chosen because it provides a cost effective, thermally efficient alternative, and was chosen for this project particularly because of its speed. Both the single and two storey areas were erected as fast as steel work, but without the need for infill masonry. The school has been designed so that all requirements such as classrooms, all purpose hall, nursery and community area are amalgamated in to one structure.

Partnering:

Understanding Balfour Beatty's objectives was vital for Structerm's highly skilled, technically qualified team. Regular open discussion and knowledge sharing meetings from the outset ensured the right solution was provided. Strong emphasis on planning and co-ordination was important to the success of the project. Working in partnership has allowed identified changes to be made improving deliverability and cost savings on future projects.

Design & Technical Support:

Structerm's in house engineers, architectural technicians



and surveyors integrated with the Balfour Beatty design team, providing an excellent design service. This ensured a totally integrated, holistic solution.

Left: Panel detail
Below: Project in progress

For further information on this or other Structerm Fastbuild® projects please contact us on **0800 040 7460** or visit: **www.structerm.co.uk**



Weeks 1 / 2:

Ground bearing slab was laid and the portal frame forming the all-purpose hall was erected. The base channels were set out and installed for the ground floor.

Week 3:

Installation of ground floor panels (1500m² floor area) was completed by the end of the third week. The panel layout developed at design stage ensured the flexibility of the system would be managed without site cutting, to maximise speed of installation.

Week 4:

At the wall head, adjacent panels were connected by a cap channel. To ensure the level at wall head configures with the architects section, a levelling channel was bedded over the complete panel footprint. The bedding channel sits snugly over both the fixed cap channels and integral steel work. All joints and panel eyelets were filled with a fire resistant PU foam as the job progressed. This eliminates the potential for air paths, improves the acoustic performance of the wall and guarantees all walls have a one-hour minimum fire resistance.

Week 5:

Fastbuild was erected within the hall structure at both ground and first floor. The internal panel face lines through with the internal flange of the stanchion to allow for a continuous internal finish. Pre-cast flooring and staircases were laid and grout filled within a day.

Week 6:

First floor channels were set out and fixed directly to the planks. First floor Fastbuild panels were installed and foam filled within just two days.

Week 7, 8 & 9:

Early completion of panel erection enables both the cavity board and cavity closers to be fixed prior to schedule. External brickwork is built up independently of the Fastbuild panels and off the critical path, a helical fixing is used to tie both leaves together.

Week 10 / 11:

High level block work is introduced to infill between the stanchions. Roof trusses and coverings begin.