PETRUF
Consulting Engineers Ltd.

HORGAN'S QUAY

Two residential blocks, up to 11 storeys
Cork, 2025

The challenge

Horgan's Quay combined a large precast system with in-situ concrete designed by other engineering teams. Every interface between the two systems had to work: load transfer, supports, geometry and connections. A clash at any of these points would have meant redesign, production delays or problems on site.

Client: BAM **Customer:** Flood Precast

Key quantities

Element	Quantity
220 mm standard walls	**2,430 m²**
250 mm stair/lift core walls	**3,316 m²**
Blade walls	**4,107 m²**
Columns (types C1–C17)	**1,301.5 m**
Edge beams (Blocks B1 and B2)	**3,408 m**
Stair risers	**807**
Landings / half landings	**84**
Integrated stair flights	**19**

Typical floor area: Block B1 1,156 m², Block B2 2,035 m² (combined 3,191 m²).

What we did

Petruf Consulting Engineers Ltd. designed and verified **more than 2,000 precast wall and header elements** across both blocks, including all connections. We **coordinated** the precast system with the in-situ design from the outset and **resolved interface issues** in the model before anything went to production.

The precast did more than enclose the building. The walls carried **vertical and horizontal loads** and provided **lateral stability**, with wall thickness, concrete class, and element size chosen to suit the load path. The **perimeter edge beams** acted as lintels over the window openings, carried load, and served as permanent formwork and support for the floor slabs. As a result, the contractor only needed horizontal formwork for the slabs; **no vertical formwork was required**.

Once each level's drawings were approved, we issued **shop drawings** and **CNC files** for automated production level by level. Each floor's panels were released to the factory within three days of drawing approval.

The result

- A two-week floor cycle on each block
- Panels for each level released to production within three days of approval
- Cost savings compared with the original design
- No vertical formwork on site, as all vertical elements were precast concrete

Why it matters for MMC systems

The same discipline applies to new MMC products: when interfaces are designed properly from the start, assessment, manufacture and installation all run more smoothly.

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