PETRUF
Consulting Engineers Ltd.

ABINGDON APARTMENTS

A large-scale premium residential development - 4 apartment blocks (A–D)
Shankill, Dublin, 2024-2025

The challenge

Cairn Homes wanted a reconstituted stone façade for Abingdon Apartments, including mullions, string courses, window cills, surrounds, banding and parapet copings. Every element was a precast reconstituted stone panel fixed back to a structural frame designed by another engineer. Every bracket, relieving angle and anchor had to carry the panels safely, fit around the brickwork infill, insulation, and remain straightforward to install on site.

Client: Cairn Homes | **Façade manufacturer:** Double L | **Architect:** MOLA Architecture | **Structural engineer (frame):** Barrett Mahony

Key elements

- 6,000+ Reconstituted stone panels
- Fibre-Reinforced Innovation
- Months Ahead of Schedule
- Rigorous Quality Control

What we did

Petruf Consulting Engineers Ltd. were appointed by Cairn Homes to develop the concept into a **fully engineered system**. On our recommendation, Cairn Homes appointed Double L, the façade panels manufacturer. Starting with Block A, we designed the **reconstituted stone panels, the stainless steel brackets and the fixings**. We built a 3D analysis model and checked the worst-case panel locations. We did **relieving angles and proposed brackets connection clash detection**.

Before production, we reviewed the manufacturer's **element drawings**, **C-channels, and balcony channels**, and signed off the **sample mock-up panel**. During construction, we carried out regular site inspections across all four blocks. On each visit we **checked bracket anchorage into the slabs, panel alignment and fixing, the brickwork interface**, and issued a report with open items tracked through to close-out.

The result

- More than 6 000 reconstituted stone panels coordinated from design through manufacture to installation
- All panels released to production months ahead of installation, giving the factory time to plan and the site team a fast, predictable fit-out
- Review, clash detection and coordination of the stainless steel relieving angles supporting the brick outer leaf kept the site programme on track
- Panels used fibre reinforcement instead of steel reinforcement, reducing weight and embodied carbon

Why it matters for MMC systems

Precast façade elements are offsite construction too, but the risk sits in the connection to someone else's frame. Shankill shows one engineer covering the whole chain, from panel design to factory drawings to site sign-off. That is how prefabricated cladding gets installed right first time, with benefits for speed, quality, health and safety, and carbon.

+353 45 498 201 | www.petruf.ie | info@petruf.ie