

Case study: McAleer & Rushe

McAleer & Rushe's Award-Winning Project Management for Belfast City Council



Summary

McAleer & Rushe has an enviable track record on Design and Build projects for delivery on time, and on budget, that is almost 50 years old. Achieving efficiency in its programmes is always a goal, and Powerproject is its tool of choice for planning and client reporting.

It was instrumental in helping one award-winning project manager at the firm to handle the numerous design delays and many stakeholder communications challenges for this Belfast City Council project.

The tight programming and communications during the construction of 9 Adelaide for client Belfast City Council was instrumental in helping McAleer & Rushe deliver its first BIM project not just on time, but early – despite design delays which required the company to make up four months, and complex connections with the existing council building next door.

This 18-month project saw the demolition of a 10-storey block and construction of a new 100,000 square foot net internal area (9,300 square metre) office building in its place.

Project manager, Margaret Conway, was awarded the coveted overall title of Construction Manager of the Year Award in 2017. In her first project management role, she achieved superb



project delivery and established an enduring relationship for her firm with a new client.

Margaret has been a Powerproject user for ten years, and it is McAleer & Rushe's standard planning solution. She utilised the software to balance progress against programme, maintaining solo control over the programme and progress reporting throughout.

Fit-out first

Margaret produced the master programme at pre-contract stage and, when starting on site, developed more

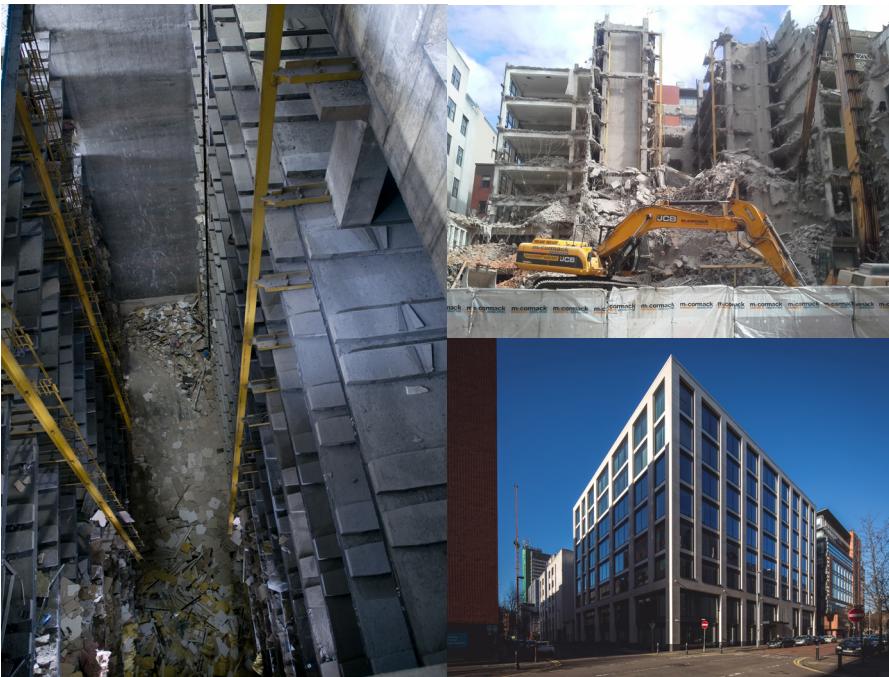
“I don't use any other project management programmes. Powerproject is easy to use, and there's no reason to use anything else.”

detailed programmes for the frame, envelope and internal fit-out elements using Powerproject.

When diving into the detail, some concern arose about the original methodology and critical path. The project had two sectional handover dates because the client needed two floors completed in November 2016 ahead of the full project in January 2017. Enabling this meant finding a way to bring fit-out works forward – yet curtain walling was to be installed on an elevational basis, and would not be complete until late in the programme. Margaret explained: “I looked at splitting the fit-out into two zones, on each floor, with the central areas being completed independent of, and ahead of, the outer works. I used Powerproject to explore whether we could then do all the fit-out work for the first sectional handover.

In that way I took a lot of the fit-out work off the critical path. We were

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able to complete the central internal meeting areas and kitchens off the critical path, then the external open plan offices followed once the elevation was finished, because they had to stay on the critical path. This new approach became our master programme, and all the sub-contractors were appointed based on the first sectional handover date, so we targeted that from the outset."

Collaborative communication

As a BIM project, managing work demanded strong collaboration between the main contractor, consultants and subcontractors. Margaret stated: "Success depends not just on getting your programme across to every subcontractor but getting them to sign up to it. I was able to use Powerproject code libraries to filter out each subcontractor programme, which was helpful as they could just see their own programme. It uncomplicated it, and was easy for them to understand. Each week I would do a progress versus programme report and just drop the line on where we were, then go through each one with each subcontractor to make sure they were on programme, and identify areas where they were falling behind, and discuss solutions to bring it back on programme"

She added: "I love the code libraries

in Powerproject, it's my favourite feature because you can break down the programmes as you want, either contract specific or area specific."

Tuesdays became dominated by progress meeting, with both internal and external meetings. Margaret said: "These meetings saved me time in the long run. In external meetings, we would have every contractor supervisor sitting in the room. It meant that every sub-contractor was able to openly discuss how other contractors' progress was impacting their works and, if there was an issue, we could chat about how to get around it, and agree solutions."

Tight oversight

Tight control was critical from the outset. Margaret used Powerproject to design an Information Release schedule to help the team stay ahead on design and procurement. She told us: "Dates from the Information Release Schedule (IRS) were plugged directly into the design and procurement schedule, and everything was worked back from the master programme. The IRS was a contract document, so it was the basis of our design and procurement and the foundation for our fortnightly design team meetings.

"I closely monitored progress on site by producing four-weekly look-ahead

reports in Powerproject, for both the internal and external elements. Weekly coordination meetings were held for both fit-out and façade works, and these programmes were reviewed at every meeting to ensure progress was maintained."

Design delays

There were a significant number of design changes made by the client during construction, which set the project back by around four months. Margaret's approach to this was: "I used Powerproject to report on design delays, reporting against the original baseline to show them where we were, then show them how we were going to try and make up that time. We managed this through intensive one-day workshops, sitting with the client and making them make fast decisions during the meetings. Before each design workshop I'd issue to the client a report of where we were, including the Powerproject programme."

Connected construction

The new office building was located close to the client's existing Head office, creating additional factors to manage, including the need to construct a link bridge between the two to enable Council staff to move between the two areas. Margaret told us: "I used Powerproject to help communication with the client's staff: to identify for them when we'd need access to the link bridge, let them know when we were doing investigation work, notify them when their fire escapes would close, and when they'd lose access to particular offices. It made it easy to send that information to the client to distribute internally. The reports in Powerproject

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are really good and easy to understand."

The new building would share a number of existing services with other facilities, expanding the number of stakeholders still further. Powerproject reports were used to help brief other internal departments, such as digital services, M&E, IT department so that they could engage services at the right time, without impacting the programme.

Façade by façade

The software also added in Margaret's analysis to identify the least-cost choice for managing the façade work. Margaret said: "I produced a programme in Powerproject analysing mast climbers versus scaffold. It allowed me to do what-if analysis to work out what it would cost if we brought in a hoist early while the tower crane was up, versus the amount of work we could accelerate by doing so. Powerproject is very good for that sort of thing because you can quickly see where you can lose resources, such as a tower crane, work everything into the prelim, and know how much each route is going to cost."

Looking forward

Ultimately, this tight project management approach paid dividends, not only meeting the first sectional handover date but with the main building handed over a full two months ahead of programme, on budget, and with a flawless health and safety record. The relationship with the client was strengthened, and has already led to another contract award.

This was a project of 'firsts', marking not only the company's first BIM Level 2

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project, a first for this Northern Ireland client, as well as Margaret's first role as project manager. The company learned much from conducting activities such as 3D scanning of the rooftop and ground floor plant areas to manage an accurate install, and from its first process of defining information requirements with the client in order to develop an effective BIM Execution Plan.

Powerproject helped to support excellent project management on this landmark project. Reflecting on the software itself, Margaret concluded: "I don't use any other project management programmes. Powerproject is easy to use, and there's no reason to use anything else. Its greatest strength is as a communication tool, and getting everybody organised. When you're having meetings, and have a programme there which specifically sets out who has to do what by when, it gets rid of any confusion. It clearly establishes everybody's responsibilities and deadlines. It makes you think right from the start about how to construct the building and that forces you to recognise risks well in advance, so you can deal with them proactively."

