

An Irish structural and civil consulting engineering firm's perspective on the value of BIM certification through NSAI

“ BIM and ISO 19650 provide an information management structure to reduce risk, helping to make sure what you're producing is accurate, and provide a better-quality product for your client. ”

SIOBHÁN MONELEY, BIM DIRECTOR AT TJ O'CONNOR & ASSOCIATES

Building smarter with BIM

*An interview with Siobhán Moneley,
BIM director at TJ O'Connor & Associates*



Providing civil and structural design services since 1937, TJ O'Connor & Associates has worked on national building and infrastructure projects and iconic developments

across Ireland. With its core team of 35 technical staff, the firm's accomplishments range from upgrading the Ringsend Waste Water Treatment Plant (WWTP) to being involved in the design of the world's first bi-steel core for Dundrum Town Centre.

Siobhán Moneley joined TJ O'Connor as a structural engineer in 2000 and moved into BIM at the firm in 2015, where she was responsible for integrating BIM processes and procedures into its quality management system. When TJ O'Connor was appointed as part of a Joint Venture for the Ringsend WWTP Upgrade project in 2016, Siobhán and her colleagues saw the potential of an approach that hadn't been available the

first time around: Building Information Modelling (BIM). They started integrating it into their quality management system.

The many benefits of BIM

Using BIM, engineers, architects and contractors can share a coordinated, detailed and data-rich digital 3D model of a project in a common data environment (CDE). This allows every change to the model to be readily available to everyone involved in a centralised location. It requires careful graphical and data organisation up-front, and in return offers ongoing enhanced collaboration on complex projects, improved quality, and reductions in wasted time, budget and materials.

While the TJ O'Connor team was ahead of the curve in adopting BIM, Siobhán is modest about the decision: *“BIM for us was a logical choice. It makes so much sense – not just the 3D modelling aspect and the huge efficiencies that brings. For us, it's a quality management system.*

It's about managing your information properly. BIM provides a single source of information, with an audit trail showing how each piece of information was checked and reviewed."

With consistent, easily-accessible digital information, everyone on the project can spend more time using their expertise instead of tracking down pieces of paper. "You're not going to get 20% more hours in the day," Siobhán explains, "but you'll get the facility to add 20% more effort to your service because you won't be spending it on searching for information."

An opportunity to achieve certification

When Siobhán and her colleagues started implementing BIM on the Ringsend project, they developed their own project CDE based on the ISO 19650 information management structures. When she heard in 2019 the NSAI was going to start issuing BIM certifications for ISO 19650-2, covering the information management process for delivering BIM projects, she seized the opportunity.

"I got in touch with the NSAI, and we were lucky enough to go through the ISO 19650 pilot scheme. In our case, a lot of the work was already done – though of course there was more to add. NSAI provided huge support and advice."

Siobhán and her team were delighted to come through the process and achieve certification. "Certification acknowledges we're holding ourselves to a standard and maintaining it. That gives confidence and peace of mind to our clients, project partners and teams."

TJ O'Connor now manages all its information to ISO 19650-2 standards, whether or not there's a BIM deliverable involved.

The firm's whole quality system is built around its BIM-standard folder structures, naming conventions and clear audit trails.

Growing through the audit process

"Achieving certification is one thing, but maintaining it is another," Siobhán explains. "You need to keep going and keep improving – which is important to us, our clients and project partners."

The certification process is an ongoing one, with recertification audits every third year and surveillance audits in off-years.

Siobhán says the continuing NSAI audits – along with the internal audits she performs every two months – have been very valuable: "The process has absolutely enhanced our work. Someone from the NSAI will come and review how we apply the standards and might notice one or two things we hadn't seen ourselves, and offer a better way to implement something."

Recognising ISO 19650's growing significance

BIM has become a vital tool for the Irish construction industry, helping firms optimise quality while making projects more efficient and sustainable. Better communication and collaboration brings less rework and waste – and using BIM to select materials in the design process can even help reduce a building's carbon footprint.

Reflecting BIM's importance in Ireland, NSAI established a dedicated BIM department in December 2024. This certification department works closely with NSAI's Modern Methods of Construction (MMC) Department and our Sustainability and Built Environment Department.

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+ The new BIM collections of standards – an initiative of NSAI, Build Digital and the Office of Government Procurement (OGP) – are available at discounted rates at [Standards.ie](https://standards.ie). And to learn more about BIM certification for your business, email NSAI's BIM team at BIM@nsai.ie.



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