

# “ON THE LEADING EDGE OF WATER AND POWER INDUSTRY DESIGN” - HOW AUTODESK CLOUD TECHNOLOGIES HAS DRIVEN INNOVATION AT TES.

## The Company

TES are water and power technology engineering experts specialising in critical infrastructure, they provide specialist services to the water/power industries worldwide. Their headquarters are based in Co. Tyrone, Northern Ireland, with offices throughout the UK.

TES provide clients with an all-encompassing service from initial project conception right through to design, construction, installation, and maintenance thus supporting their clients throughout the entire life cycle of the project. TES continue to grow year-on-year and their quick adoption of digital technologies ensure they are at the forefront of their industry and gain access to higher-value projects.

The company prides itself on being, progressive, responsive, client-needs-driven and a leader in technology innovation. These core characteristics have resulted in highly efficient internal manufacturing capabilities and meaningful client partnerships, enabling TES to provide custom-designed, flexible solutions.

## Building an approach

TES works closely with Pentagon Solutions, who have played a significant role in introducing Autodesk Technologies to the company. Pentagon ensured TES gained better efficiencies and maximised their technology investment by implementing the software, onboarding users, and providing training and support throughout the company.

Pentagon Solutions, a gold partner of Autodesk technologies, with real-world experience in Building Information Modelling (BIM) Consultancy, EDM (Engineering Document Management) solutions and project delivery services, continue to partner with companies throughout the UK and Ireland to drive the adoption of digital strategies and workflows.

TES started off using Autodesk’s AEC Collection (in particular, Revit, AutoCAD, Navisworks and Plant3D for P&ID production and 3D models).

Neil Quinn, M&E Design Manager, at TES Group: **“Over time, more projects were mandating the use of Autodesk Revit® models. The industry including structural designers are using Revit, so we went on the journey for our mechanical and electrical (M&E) work.”**

TES have now expanded their portfolio to include Autodesk’s BIM 360 (Cloud software). Combining the different software solutions enabled TES to digitise their day-to-day design workflows leading to significant time and cost savings. The key drivers here included: achieving enhanced collaboration internally but also across the Project supply chain, the opportunity to participate in a Common Data Environment (CDE) to establish project-wide communication and cooperation, as well as generating live links to Revit models. Multiple teams can now collaborate using BIM 360 on projects, with designers working together to coordinate the models.

Through Revit’s 3D design collaboration capability, TES Group can automatically upload models to the cloud, making it easy for project stakeholders, including clients and contractors, to view the models and make any mark-ups required.



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## Reaping the rewards

Throughout the pandemic, the cloud collaboration that Autodesk BIM360 supports has been a key benefit for TES *“All we need is an Internet connection and a licence for the software and we are up and running. We can work from anywhere,”* said Quinn. *“we did not really appreciate the value of the cloud until everyone was sent home at the start of the first lockdown. The use of collaboration software benefits both the design team and clients enabling both parties to get their points across, possibly even better than they might be able to do face to face sitting around a table with 2D drawings printed out.”*

The close integration between all the different software solutions has been another key benefit for TES. *“The Revit interconnection with BIM 360 was a real gamechanger for us,”* says Quinn. *“But the more we use this software combination, the more benefit we see from using it. We have started to use mechanical, electrical and plumbing (MEP) parts of AEC Collection for fabrication which, for example, have part numbers that you can take-off directly from your model and provide to your supplier using Autodesk Navisworks®.”*

Throughout this whole digital process, TES has benefited from close engagement with Pentagon Solutions Ltd, which in addition to help with digital workflows, software training and bespoke support, provide *“real world”* BIM consultancy services to TES.

As Quinn confirmed: *“Working with Pentagon Solutions has added so much value to our business, especially on recent projects where they have added so much insight on everything from the federation of models and setting up clash detection tests with Navisworks to sequencing models to a construction program, all of which has helped save us time and money and improved our communication with the client.”*

Nicola Herdman, AEC Business Development Manager at Pentagon Solutions, said: *“We have a strong business relationship with TES as they see us as a trusted advisor and can appreciate the value we add to their business. The full team at Pentagon Solutions work closely with TES through project work, technology development, training, and customer services. We have a strong focus on business benefits, value-added services and how to overcome pains points. Our expertise in the AEC industry helps clients succeed in their digital journey.”*

## Looking positively forward

TES is now looking at expanding its use of Autodesk technologies further in the future. The design, site and project management functions across the organisation are so beneficial that the team are completely sold on the capabilities of the Technology. Today, the group is looking to expand further on its capabilities by exploring third-party apps that work with BIM 360 to bring in new virtual reality capability to improve visualisation for clients and stakeholder engagement. TES has always proved willing to push the technology boundaries in the mainly conservative water industry.

TES appreciates the guidance and support it has received from Pentagon Solutions which has paid off hugely, resulting in streamlined processes, reduced time spent conducting work and most importantly saved the company money.