

Poppleton

The company

Poppleton is one of the United Kingdom's leading producers of ventilation ductwork solutions. Operating since 1924, they now specialise in the design, manufacture, installation, project management and remediation of specialist ventilation ductwork systems to national and international standards.

Challenge

Poppleton wanted to develop and implement emerging digital construction technologies and building information modelling (BIM)-based processes. This would enable them to win larger contracts and become a market exemplar of using BIM for manufacturers, with a particular focus on products for the nuclear ductwork supply chain. This expertise did not exist in the in-house team and the new technologies needed to be embedded in the company.

Additionally, the COVID-19 pandemic occurred during the first year of the project, impacting on several areas of the business, including the supply chain and operational elements. These extra challenges meant new ways of working needed to be adopted to meet the aims of the project.

Solutions

A Knowledge Transfer Partnership (KTP) programme was established between Poppleton and the University of Wolverhampton to support the project with its BIM adoption and the added complexities brought through a global pandemic. Emma Hughes, a product design engineering graduate, was employed as the KTP associate working with Poppleton to extend the company's BIM capabilities, drawing upon the expertise of Professor David Heesom from the School of Architecture and Built Environment in the Faculty of Science and Engineering.



The KTP was an exceptional experience and provided me with excellent career opportunities when the KTP ended. During my time on the KTP I developed diverse skills, attended advanced courses and gained further qualifications.

I would definitely recommend a KTP to anyone. I was provided with extensive support, resources and connections from the university and from Poppleton, during and after the KTP.

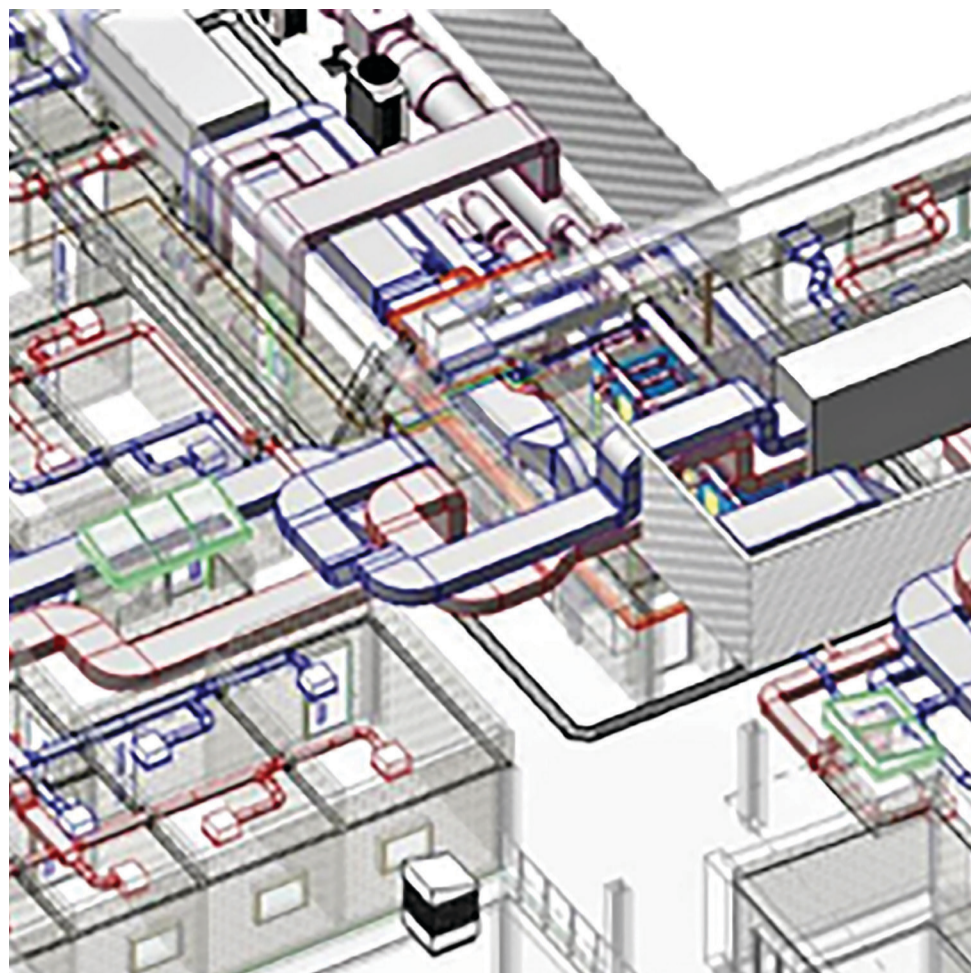
Emma Hughes





The KTP has been a fantastic experience and helped to put the theory and research into the real world, seeing just how emerging techniques and technologies can impact the industry. At the start of the project, some of the work we undertook was just theoretical, but through the project and the open-minded thinking of the company to drive forward with innovation, we have been able to see just how research can make an impact. The fact that we have also developed a range of industry-based case studies and teaching examples along the way is the icing on the cake!

Professor David Heesom



Results

The programme exceeded the initial remit of achieving BIM compliance for Poppleton, pushing the boundaries of BIM technologies and processes, enabling them to become a market leader and provide innovative, fully digital BIM workflows. This project included supporting Poppleton in utilising digital measurement techniques for site surveys, integrating design, manufacture and construction through a real-time intelligent 3D model and the use of 4D simulations to provide a visual representation of a project workflow.

In addition to achieving the initial aims, the work undertaken throughout the project has allowed the company to unlock some significant new contracts and engage directly in the manufacture supply of all folded ductwork for the Hinkley Point C nuclear project. The development of BIM and digital construction capabilities within the company, including the integration of complete digital workflows from design through to installation, were key to this work being won.

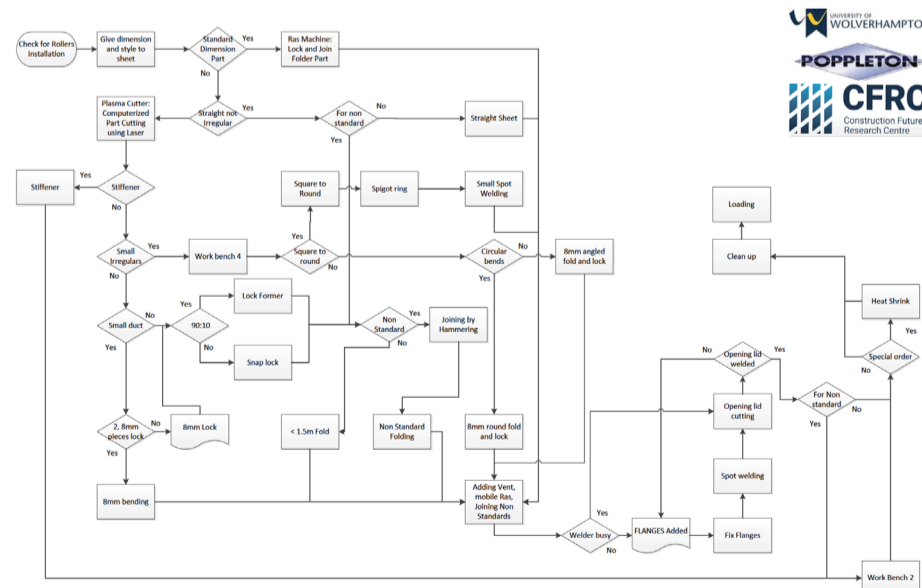
The project has been transformational for the company and has led to a change in how all projects are managed and delivered using BIM techniques, truly embedding BIM culture within the company.

Knowledge Transfer Partnerships (KTPs) aim to help businesses improve their competitiveness and productivity through the better use of knowledge, technology and skills within the UK knowledge base. This KTP project was co-funded by UKRI through Innovate UK and the Welsh Government.



Through adoption of the KTP, Poppleton has enjoyed considerable benefits, driving our building information solutions to be industry-leading and supporting our business growth through efficiencies and the development of talent. Engagement with academia and in particular the University of Wolverhampton has ensured that we remain at the forefront of technology and are building a sustainable future for our business.

Tim Hopkinson
Director, Poppleton



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