

# CASE STUDY



From learning to leading: Delivering real impact on the shop floor

How Degree Apprentice Barry Levitt is applying academic learning in a live manufacturing environment to drive efficiency, capacity and smarter decision-making at Dacon Fabrications.



**University of  
Sunderland**

"Barry is a perfect demonstration of the impact a degree apprentice can have on an employer. His ability to translate the knowledge he gains at the University of Sunderland into the workplace is something we are proud to be a part of."

**Dr Derek Dixon / Associate Head of School for Computer Science and Engineering / University of Sunderland**



"Barry's work has provided valuable insight into how we can maximise our existing space while supporting future growth. His approach reflects the real benefit apprentices can bring to a business from day one."

**Andrew Boyes / Quality & Operations Manager / Dacon Fabrications Ltd**

## Background

Dacon Fabrications Ltd is a specialist manufacturer focused on delivering high-quality fabrication solutions. As the business continues to grow, increasing production capacity has become a key priority.

Barry Levitt, an Engineering Practice (Manufacturing) Degree Apprentice at the University of Sunderland, is supporting this growth through the application of lean principles and digital tools, demonstrating how apprentices can deliver real impact in a live operational environment.

## Approach and Solution

To support increased production demand, Dacon identified the need to introduce a new laser cutting machine. This presented a strategic decision: expand the factory or reconfigure the existing layout.

Taking this challenge forward, Barry played a key role in supporting a data-driven decision-making process. Applying principles from his degree, he helped assess layout options through a lean manufacturing lens, using quantitative data to evaluate flow, space utilisation and overall productivity.

A key element of his contribution was the development of a to-scale CAD model of the shop floor, enabling the team to visualise and test different layout scenarios before implementation. This approach provided clarity, reduced risk and ensured that the chosen solution – a full internal reconfiguration – would deliver both practical and operational efficiencies.



## Outcome and Advantage

Barry's contribution highlights the tangible value apprentices can bring when learning is applied in practice:

- Data-driven decision-making supporting business growth
- Improved shop floor layout and space utilisation
- Reduced risk and cost through digital visualisation and planning
- Application of lean principles in a live manufacturing setting
- Demonstration of the value of apprentice-led innovation.

"Being able to apply what I've learned at university to a real project like this has been incredibly rewarding. Seeing my work support a live business decision has really brought my learning to life."

**Barry Levitt / Degree Apprentice / Dacon Fabrications Ltd**

To explore engineering degree apprenticeships, come along to one of University of Sunderland's online information events to find out more. Details [here](#)

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