

CASE STUDY - TECH EDGE WEST, DIDCOT

PRODUCT Purlins & Side Rails

SECTOR Science, Technology & Innovation

FABRICATOR Nationwide Structures

MAIN CONTRACTOR Glencar Construction

» 70,000 sq ft sustainable tech, laboratory and office development

» Purlins and side rails manufactured from Metsec's Decarb range of lower embodied carbon steel



voestalpine Metsec partnered with Glencar Construction and Nationwide Structures to supply 65 tonnes of cold rolled purlins, side rails and accessories for Tech Foundry 3 – Tech Edge West at Harwell Science & Innovation Campus near Didcot, Oxfordshire. Manufactured using lower embodied carbon Electric Arc Furnace (EAF) steel, the solution supported the project's sustainability targets while providing efficient delivery, reliable lead times and high-performance structural support. Supported through the Metsec Decarb solution and Metsec's UK stock holding of S450 grade EAF galvanised coil, the project demonstrates how collaborative working and advanced steel technologies can contribute to more sustainable modern construction.

Tech Foundry 3 - Tech Edge West is the latest of 3 buildings providing 70,000 sq ft of flexible lab, advanced manufacturing & office space to Harwell Science & Innovation Campus near Didcot in Oxfordshire.

The new cutting-edge Tech Box & Research & Development Space, which was delivered by Glencar Construction, features a sawtooth roof design optimized for photovoltaic installation, photo carbonate facades that enhance natural daylighting throughout the building. A fabric-first design approach was adopted to help maximise operational energy efficiency, while embodied carbon reduction remained a key consideration throughout the material specification process.

With sustainability at its core the embodied carbon content of the building materials required careful consideration. Glencar Construction partnered with steelwork fabricator Nationwide Structures to design, fabricate & erect the structural steel frame which consist of 360 tonnes of hot rolled EAF steel providing a significantly lower embodied carbon content to the blast furnace alternative.



EFFICIENT DELIVERY THROUGH COLLABORATION

The embodied carbon content of the cold rolled purlin & side rail elements of the structure was also an important factor in reducing the structures embodied carbon levels. With lead time being a key factor, Nationwide Structures partnered with voestalpine Metsec to manufacture & deliver 65 tonnes of cold purlins, side rail & accessories.

Metsec's Decarb solution enabled the project team to integrate lower embodied carbon steel into the construction without compromising structural performance, programme requirements or build quality.

Collaboration across the supply chain played a key role in the successful delivery of the project. Working closely with Nationwide Structures and Glencar Construction enabled coordinated planning, efficient manufacture and reliable delivery of the structural steel package throughout the programme.

voestalpine Metsec's large UK stock holding of S450 grade EAF galvanised coil also supported short lead times, responsive supply and programme certainty, helping maintain construction momentum and support overall project efficiency.

By incorporating EAF steel across both the hot rolled and cold rolled structural elements, the project provides a practical example of how the construction industry can reduce carbon impact while delivering high-performance commercial and innovation spaces. The project also demonstrates the growing role of solutions such as Metsec Decarb in supporting the transition towards lower carbon structural design and more sustainable construction practices.

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ONE STEP AHEAD.