

Manor Farm Bridge, Somerset

PROJECT TEAM

Architect and Structural Engineer:
Dyse Structural Engineers

Steelwork Contractor and Main Contractor:
Beaver Bridges Ltd

Client:
Emily Estates

“Judges’ comment

This private commission has resulted in a beautiful bridge to an exemplary standard of steel design and workmanship that goes way beyond the simple requirements of bridging the highway for farm traffic and provides a new safe route for the Monarch’s Way bridlepath.



Manor Farm Bridge is a 33 metre long vehicular and pedestrian bridge located at Emily Estate in Somerset, home to the award-winning Newt Hotel and the celebrated Viper aerial walkway. The bridge exemplifies architectural innovation, engineering precision, and environmental sensitivity. It connects previously divided farmland across the A359, improving logistics for agricultural vehicles and offering safe, sustainable access for residents, pedestrians, cyclists, and equestrians.

The bridge’s design reflects the estate’s premium aesthetic, incorporating curved steel girders, 60 tonnes of bespoke architectural fins, and a vehicle restraint system. Each fin is structurally integral and uniquely fabricated, requiring advanced CAD modelling and meticulous welding to ensure perpendicularity and alignment. Hidden inspection hatches were seamlessly integrated into the fin cladding to meet maintenance requirements without compromising visual integrity.

The use of architectural fins created many challenges as each one was unique in design, manufacture and installation. Joining the fins to the girders prior to the lift created a risk of twisting and becoming out of alignment. This was exacerbated when the road surface was installed, so the next test was to ensure the bridge would not buckle in the lift and under the weight of wet concrete.

Engineered to withstand dynamic loads from fully-loaded farm traffic, the bridge features a steep camber for road



clearance below, semi-integral bearings, and a durable exposed aggregate road surface edged in Blue Lias stone. The steelwork was fabricated in 12 transportable sections, reassembled on site and then lifted into place using a 600 tonne crane, with site safety and logistics expertly managed throughout.

The bridge’s installation has significantly improved farm operations, reduced reliance on public roads, and enhanced the estate’s connectivity. Its lightweight steel structure complements the surrounding landscape and architectural language, while a dedicated landscaping scheme provides visual screening and ecological enrichment. The bridge’s corrosion protection was applied offsite, ensuring longevity and minimal maintenance, and its steel components are recyclable, supporting circular economy principles.

Delivered on time and within budget, Manor Farm Bridge is a testament to collaborative excellence. The project team overcame complex design, fabrication, and engineering challenges, transforming a concept by South African architect Mark Thomas into a UK-compliant structure approved by Somerset Council.

Through community engagement, innovative design, and sustainable construction, Manor Farm Bridge stands as a landmark of rural infrastructure. It showcases how structural steel can deliver both function and beauty, creating a lasting legacy for the estate and its visitors.