



Allerdene Bridge Gateshead

Location

Gateshead

Client

National Highways

Tonnage

3,400 tonnes

Main contractor

Costain

Completion date

March 2023

Severfield constructed and installed a new 3,400-tonne bridge on the A1 at Gateshead as part of the A1 Birtley to Coal House Improvement Scheme, due to open by Spring 2025.

As market leaders in steel fabrication, Severfield was well-suited to installing the new 3,400 tonne bridge on the A1 near Gateshead.

As part of the Birtley to Coal House Improvement Scheme, the new Allerdene bridge – which spans over the East Coast Mainline (ECML) - aims to improve the existing road alignment and the safety of its users.

The new 155m long, three span composite bridge structure is formed from 16No. 2.4m deep plate girders that were fabricated on Severfield's automated T&I machine in Lostock. Due to their length, the central span girders were delivered to site in three sections, after which they were assembled into 90m long braced pairs before being transported by a self-propelled modular transporter (SPMT) to the crane and lifted into position over the ECML.

The size and weight of the girders demanded the use of the largest mobile crane in the country, the Gottwald AK680. With only a 4-hour window available during each Saturday, only one braced pair could be lifted per week. Once the central span girders were installed, smaller crawler cranes were then used to install the 32 No. 30 tonne back span girders which complete the bridge.

In collaboration with the client, Severfield used our expertise and experience to navigate through several challenges along the way, including working over and adjacent to the ECML and existing A1 against high winds, heavily trafficked areas, and during rail strikes. Despite the challenges faced, we ensured that the project was delivered safely, in a timely fashion, and to scope.

In accordance with Severfield's commitment to sustainability, reusable temporary works components were used where possible to construct the bridge, all of which were dismantled and returned to the construction yard upon completion for re-use in future projects, thereby resulting in little wastage associated with the project.

Severfield continues to invest in the future of steel reuse, streamlined steel fabrication, and Installation: Allerdene Bridge highlights our commitment to creating better ways of building in a world of changing demands.