

# GOSPEL OAK TO BARKING RAIL BRIDGES

**Client:**

Network Rail

**Person of Reference:**

Mr Patrick Shaw  
Tel 07590418140

**Main Contractor:**

Murphy

**Completed:**

2011

**Contract Value:**

£874k

**Tonnage:**

4 x 70 tonnes



The project involved the replacement of four bridges on the Gospel Oak to Barking railway line over three weekends, during 50hr possessions of the railway. The project is part of a wider scheme by Network Rail to ensure railway infrastructure is upgraded to suit current traffic loadings. The Gospel Oak to Barking line is heavily used by freight as well as passenger trains, so it was deemed appropriate to replace the 120 year old bridges.

All four of the bridges are located over narrow residential streets, which meant carefully planning on the size of the equipment and how it could be used. A 500 tonne crane was utilised for each bridge in very specific positions to ensure the work could be carried out without risking damage to the surrounding environment.



The existing bridge decks were removed in three sections, using the crane to remove one part at a time. The replacement bridge was fabricated and delivered in two sections; these were lifted into position such that the holding-down bolts for the bearings aligned with pre-formed sockets in the bearing plinths.

**CBUK's Role** - Cleveland Bridge were responsible for rigging design for lifting the bridges, fabrication of the structural steelwork, procurements of major components and the erection of the steelwork.

**Design** - CBUK provided expert advice to the principal contractor on erection methods and details for ease of fabrication and buildability.

**Fabrication** - The steelwork elements of the structure were fabricated in CBUK's Darlington facility. The sizes of the elements were designed to allow them to be transported to site by road haulage. Throughout the fabrication CBUK utilised state of the art engineering techniques including a trial assembly of all the bridges to ensure that the fit up was assured when delivered to site.

**Erection of Superstructure** - Sub assembly areas were established on the east and west of the transfer deck footprint to allow the fabricated steel sections to be formed into larger elements.

**Completion of Works** - CBUK commenced on site in late September 2011 and erected 1No bridge the first weekend, 2No bridges the second weekend using 2No 500Te cranes and 1No bridge the third weekend. All work was completed within the tight 50hr weekend possessions. All works were completed by mid October 2011 in accordance with the contract programme.