

Bridge over A249 Brielle Way, Sheerness – Wildfire Bridge



Client

John Sisk and Son Limited for Peel Ports Group

Project Description

The new crossing provides access from Sheerness docks to the site of the former Sheerness Steel Mill by a single carriageway. The bridge and embankments have an overall length of approximately 220m, allowing the structure to cross the existing A249. The deck is of a composite integral construction with tapered steel beams used to achieve the required headroom to the carriageway below. Abutments are reinforced concrete and supported on piles. To allow construction of the embankment ground improvement works were carried out using controlled modulus columns (CMC's) and surcharging. Reinforced earth embankments with side slopes of 70 degrees were used to minimise the structures overall footprint.

Cass Hayward Role(s)

- Detailed design of bridge permanent works including category 2 check
- Detailed design of highways
- Design of embankment surcharging
- Co-ordination with ground improvement and reinforced earth designer

Project Statistics

- Completed November 2017
- Contract Value approximately £3m
- Bridge clear span of 36.5m
- Embankments with a total length of approximately 180m
- Over 700 controlled modulus columns installed

Special Features

- Designed for port vehicle loading
- Soil-structure interaction analysis carried out to allow optimisation of integral design
- Existing ground beneath embankment improved using controlled modulus columns
- Permanent formwork and Paraslim falsework used to reduce working from height
- Reinforced earth embankments with 70 degree side slopes and a maximum height of 7.1m