

Balmoral Road, East Ham, London



Client

Network Rail

Contractor

Kier Rail

MLM Rail Services

Detailed repair design

Inspection

Topo

FEO Analysis

MLM were commissioned to carry out a principal inspection of a 10m wrought iron beam structure with cast iron transverse spanning buckle plates at Balmoral Road, East Ham, London.

The inspection was to address issues raised from previous assessment work by others and to resolve previous assumptions. Following our inspection we produced a feasibility report recommending Finite Element Analysis for the buckle plates, this was carried out and showed that the buckle plates would indeed pass an assessment to BE4 (subject to exact construction). However, further more detailed intrusive inspections found previously hidden damage to sections of the structure resulting in a joint decision with Network Rail to close the bridge.

We then carried out a detailed design, through the GRIP 4 - Form A and GRIP 5 - Form B process, for a reinforced concrete overslab scheme, revised carriageway vertical alignment and wrought iron beam repairs to allow the bridge to re-open.