



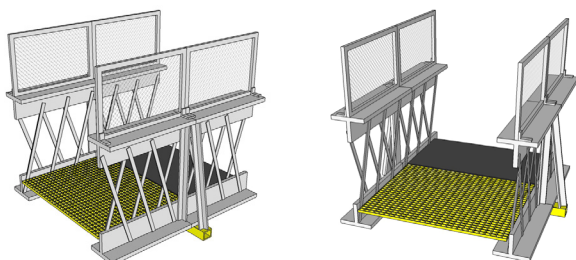
Kearsney Station Footbridge Feasibility Study

Frankham Consultancy Group were commissioned to review the viability of refurbishing Kearsney Station footbridge to extend its remaining design life, rather than replace.

Overview

The footbridge is a single span structure; the main span is formed of wrought iron lattice main girders with transverse cross girders and outriggers with a timber deck. The staircases comprise cast iron stringers supporting timber treads, and landings supported by cast iron angle column trestles.

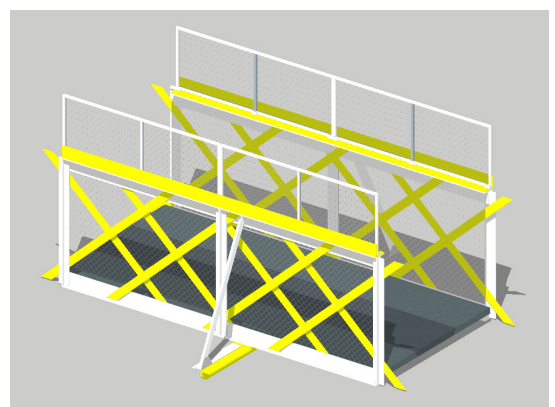
The project scope was to design and specify low maintenance elements to refurbish the structure whilst increasing the overall load carrying capacity of the footbridge. We also undertook an inspection for assessment and a targeted structural assessment. These assessments informed the feasibility study and provided our client with the current status of their asset.



Client:
BAM Nuttall

Services:
Structural and measured surveys
Survey specification
Feasibility studies and optioneering
Structural assessment
Design assurance forms
Engineering assurance: CRE-D competency.

Start and End Dates:
Jan 2020 – April 2021





Innovation and Stakeholder Management

Optioneering was undertaken at an early stage to ensure the existing appearance of the structure was maintained, without altering or detracting significantly.

The team used 3D design software to model the feasible options, augmented reality software was used to share the proposed refurbishment and strengthening alterations to the footbridge with the asset owner.

Use of this technology enhanced the value of project by providing the stakeholders with real-time, 3D immersive visualisation of new design

proposals including full-scale models projected into their contextual environments.

By illustrating how the appearance would change, we supported the client to make an informed decision on their preferences which helped to facilitate their approval.

Integrating this technology with traditional drawings on our projects allows for designs to become better integrated with the actual landscape, whilst providing clearer communication of concepts to stakeholders.

