

# Rail Viaduct Repairs Featuring Digital Modelling and Data Capture

OSBORNE

3D modelling and mobile data sharing and collection improved efficiency and accuracy on a rail viaduct repair project.

**PROJECT**

Aldershot High Street Viaduct Bridge

**CUSTOMER**

Network Rail

**LOCATION**

Aldershot

# Issue

The Aldershot High Street Viaduct bridge was generally in poor condition with extensive corrosion throughout. The cross girders had shown signs of excessive movement leading to speed restriction for trains. The project replaced the deck and installed new precast concrete cill beams.

# Solution

The site team used BIM 360 Field and Glue using a mobile device. These provided data capture tools and the ability to access and save data to a 3D model. This environment allowed site users to capture their daily diaries via a mobile tablet including:

- Automatically updating and recording the weather in their area
- The number of workers on site for each company.
- Live and accurate updates from the site including descriptions and photos.

Using BIM tools, we also created a 3D model of the bridge for visualisation. Photos were captured on mobile devices and attached to each site diary automatically, saving significant time compared to previous methods.

# Outcome

Daily diary efficiency and accuracy were improved by automatically storing them within the Autodesk BIM 360 CDE. Users could fill them out live on site and

continue to update information using the draft function. There was also consistency in the quality and size of photos captured. Using the 3D model for simulations and planning allowed the project team to demonstrate visually the methodology of works, review and test the methodology in a risk free virtual environment, and communicate and visualise ideas on and off site.

