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Bryanton Bridge Case Study

Aberdeen to Central Belt Decarbonisation Programme

Client: Network Rail
Project Value: £1.25 million
Duration: Nine weeks from February to April 2023
Location: A92, Bryanton near Inverkeilor, Scotland

Bryanton is a single 7.5 metre span masonry arch bridge carrying a private access road over the twin-track ECN4 line. The stone archway and parapets have been replaced with a simple, functional concrete-based structure to increase the distance between the track and the underside of the bridge to make room for overhead line equipment. The scheme is part of the Aberdeen to Central Belt (A2CB), an integrated programme of infrastructure and rolling stock enhancements designed to meet the Scottish Government's decarbonisation requirements. There are 160 structures on the route between Dunblane Station and Aberdeen Station, with 148 requiring some level of intervention.

Scope of works

Bridge deck demolition, replacement, masonry repairs and civil engineering. The demolition was carried out during 29-hour disruptive track possession. The new bridge construction was carried out using mobile crane to install the pre-cast concrete deck arches with pre-cast and in-situ concrete parapets with new surfacing to both approaches.

- De-vegetation to form access roads and laydown areas
- Superstructure demolition
- Installing 10 precast concrete deck units and 2 cill beams
- Installing precast and in-situ parapets
- Reconstruction of approach roads to the new deck

CHALLENGES Working on and adjacent to the A92 required road closures for crane lifting and carefully monitored single-lane traffic management. It was also important to protect the retained structure and railway line using bog mats.





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