

Asset Strategy Minimises Risk for Bovis Homes Apsley

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Project Overview

When Bovis Homes needed a new overbridge to access their proposed Manor Estate Development, they chose to deal solely with Osborne.

During our early involvement in developing the project strategy and designs, our optioneering and knowledge of Network Rail's 'Outside Parties' process proved invaluable in achieving technical approvals and developing a buildable design solution.

Through embedding safety at the heart of our designs and considering methodology from the outset, a scheme was finalised that minimises possession requirement and risk to the railway both during construction and for operation and future maintenance.

Early Contractor Involvement achieves best value for Featherbed Lane

Featherbed Lane Overbridge is a narrow vehicular bridge crossing the London Midland Line, approximately 1 mile east of Hemel Hempstead Station and connects a number of residential areas either side of the railway. A separate bridge is provided for pedestrians that sit's directly adjacent to an Overhead Line Electrification gantry, next to the vehicular structure.

Our early contractor involvement included developing proposals to improve access through providing a new bridge in the location of the existing pedestrian bridge to carry westbound traffic and pedestrians, and revise the existing road configuration to put eastbound traffic only over the existing vehicular overbridge.

An innovative solution to prefabricate the new structure off-line and launch into its permanent position is being finalised will utilise self-propelled modular transporters. Bespoke temporary works will include fixing a launching "nose" and "tail" to the bridge structure, to cantilever it over the railway without the need for temporary supports at track level. Weathering steel components for the bridge steelwork will not require maintenance painting.



TOP: View up Featherbed Lane at King Edward Street junction over existing bridge

BOTTOM: Existing vehicular bridge and OLE gantry

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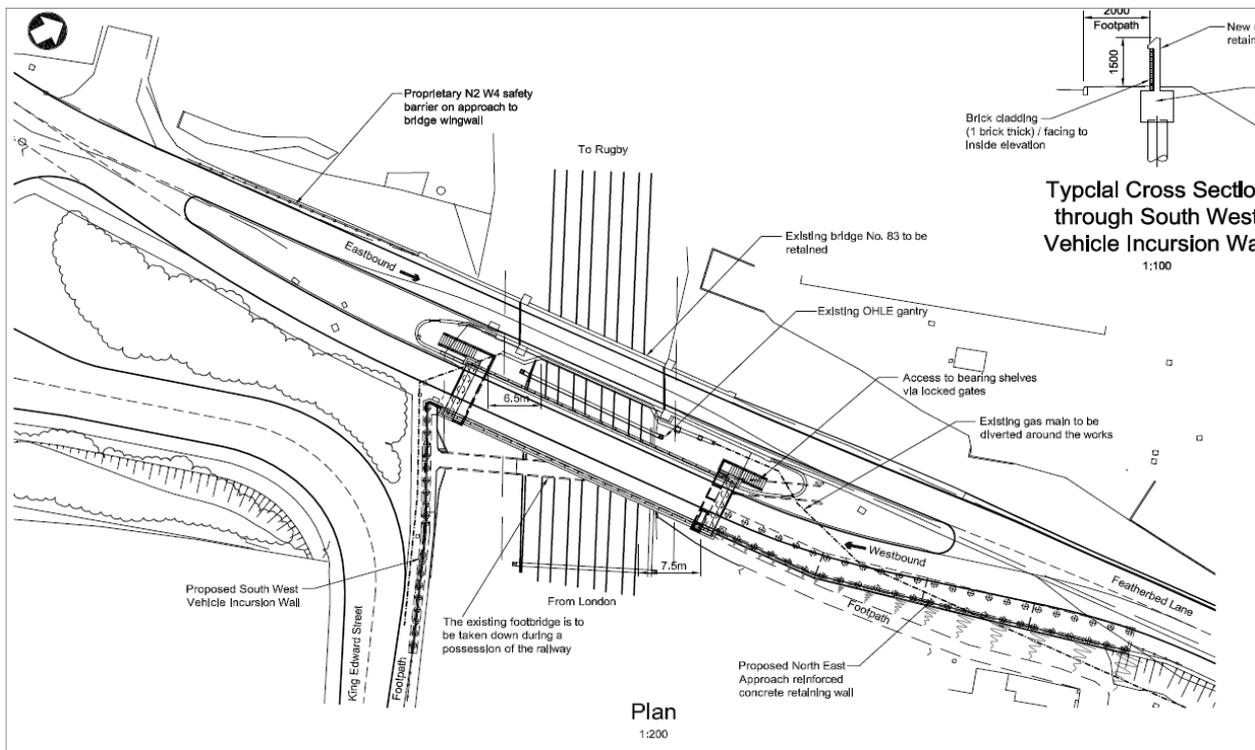


Clever phasing minimises risks and local disruption

Working with our design partners and alongside the Local Authority team and Network Rail, a two phase solution has been developed that minimises disruption to both the road network and the operational railway:

- Phase 1 will see removal of the existing footbridge and construction of a new junction with permanent vehicle incursion barriers to prevent vehicles from encroaching onto the railway line.
- Phase 2 will see assembly of the prefabricated bridge sections and temporary works to allow the bridge to be launched over the railway and the final parapet and bridge works to be completed.

We are currently in the process of finalising the design and plan to commence the construction of this challenging scheme with Bovis Homes shortly.



TOP: View from pedestrian bridge that is to be removed

BOTTOM: Bovis Homes