

Introduction

This note provides an update to Progress Update No 12.

Active Travel Opportunity

As discussions with Sustrans progressed, it became clear that the width of the bridge would have to be increased to accommodate the desired segregated Active Travel space. Based on the significant progress of the design to date, incorporation of these changes would not be possible without significant additional cost and delay, and hence the major junction realignment works are no longer being pursued. Having said this, the bridge design already includes for Active Travel provision, and the alignment design considers possible future extensions to the cycle lane and shared-use path.

Drainage and Ground Investigation Surveys

All site surveys necessary for the design have now been completed.

Design progress

The design of the bridge is now mostly complete. The Consultant, Mott Macdonald has produced draft drawings, specifications and a 3D model of the proposed structure. A detailed design review has been completed, and the Consultant is now incorporating comments from the Council, Contractor, Checker and Road Safety Auditor into the design. It is expected that the final design will be ready in January.

For those interested in the technical details, the new bridge is an integral structure (no bearings). 33m-long precast concrete Y-beams support a reinforced concrete (RC) deck slab and vehicle restraint system. The beams are structurally connected to an RC diaphragm beam which is supported on RC columns and RC spread foundations. The columns are surrounded by reinforced soil abutments which retain the embankments and support the traffic loading on the approach to the bridge. The deck is drained with combined kerb drainage units which connect into the existing A90 drainage.

Pricing and Committee Approval

The Contractor, Balfour Beatty is now pricing the project based on the draft design, and developing the construction programme. Until the price and contract terms are agreed, it is unknown if Council Committee approval will be required for the bridge, and this will dictate the construction timescales. Further information will be available in January.

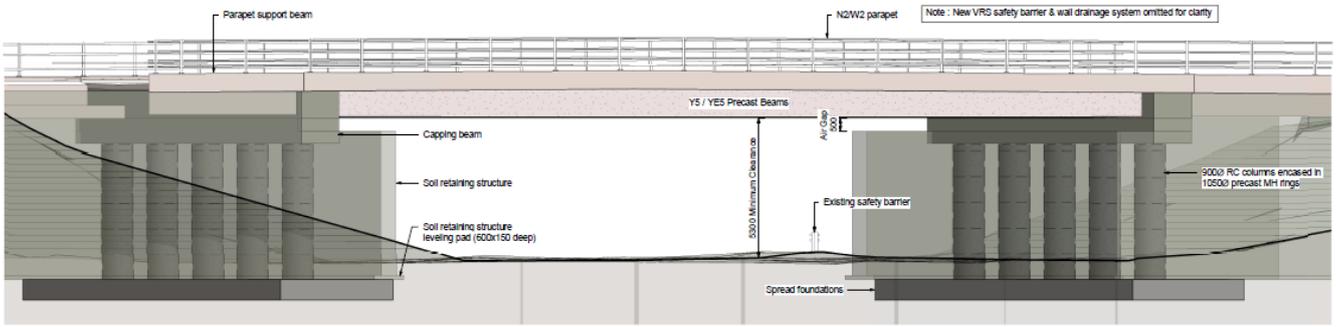
East Junction Feasibility

Parallel to the design, a feasibility study into options for improving the sharp bend at the East junction of the bridge are being investigated. The Consultant is investigating removal of the traffic island and/or re-prioritisation of traffic, to potentially improve the safety of all users. Extension of the cycle lane beyond that shown below, to link into the existing cycle route NCN1 is also being investigated. Further details will be available in January.

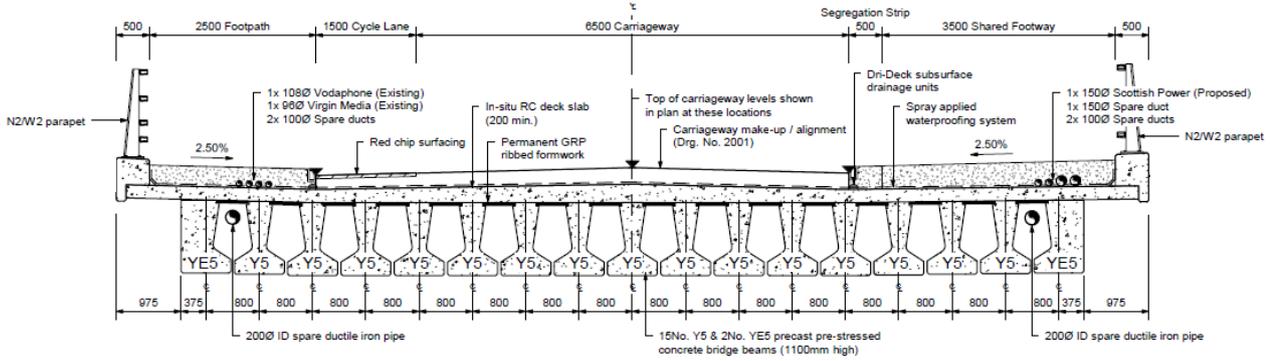
Design Drawings and Renders

The following drawings and renders give an indication of how the final structure will look, however they are still in draft status, and are subject to the ongoing feasibility investigations at the East junction. To match other buildings in the area, the colour 'pewter' has been chosen for the reinforced earth facing blockwork. Concrete will use a standard cement and therefore be a lighter grey. Parapets will be galvanised. The cycle lane will not be solid red as shown below, but rather utilise red chippings within the asphalt surfacing.





Elevation on bridge showing hidden internal structure



Typical Cross-section of deck



(All visualisations courtesy of Mott Macdonald)