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National Asset Delivery
Technical Surveys and Testing

Site Information for
A303 67.0 B3092 Underbridge Rev 1
PIN: 570135

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1 SITE INFORMATION

1.1 Site boundary, extents and access arrangements

The B3092 Underbridge carries the A303 over an unnamed road at marker post 67.0 ('ArcGIS' indicates the Umbridge is located between MP172.3 and MP172.4 instead). The structure is at Ordnance Survey Grid Reference 378138 / 130681.

The Underbridge was constructed in 1991 and has a skew of 10 degrees. The structure comprises of a three span continuous reinforced concrete solid slab which is supported on reinforced concrete bankseat abutments via elastomeric bearings at either end and two intermediate piers comprising of four reinforced concrete columns. Each column is built into the deck. All supports are founded on reinforced concrete spread footings. The deck is 24.10m wide. The lengths of the two side spans are 17.26m each and the centre span length is 21.32m. The minimum headroom clearance is 5.76m.

The proposed refurbishment works will require temporary traffic management with contra-flow traffic. The locations of potential crossover points are summarised below:

- South Crossover Point: between Marker Posts 173/0 and 172/6 (on south of the River Stour Bridge on the south side of the A303 67.0 B3092 Underbridge);
- North Crossover Point: between Marker Posts 172/2 and 171/8 (on north of the A303 67.0 B3092 Underbridge).

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Location Plan

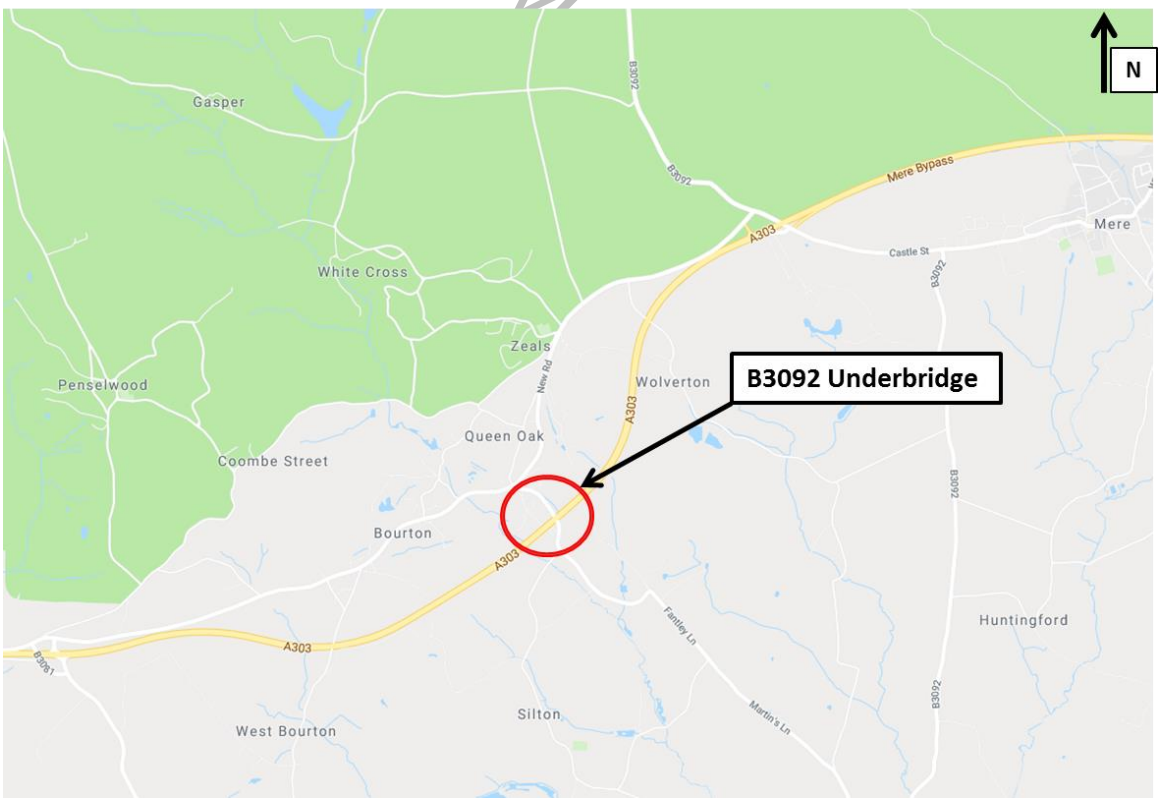

Figure *1: Location Plan: A303 67.0 B3092 Underbridge*

1.2 Pavement

According to the As-built drawing, the existing carriageway surfacing system comprise a 40mm HRA wearing course, a min 55mm basecourse and an additional 20mm bituminous protection to the waterproofing. Not clear details are shown for the verges and central reserve. Verges, central reserve and carriageway details to be confirmed from the trial holes.

1.3 Drainage

The bridge decks comprise a sub-surface drainage (along the transverse expansion joints) and through deck drainage pipes. The existing deck subsurface drainage system comprises 45x30mm RHS aluminium drain along the expansion joint. The aluminium drain ends within porous no fines concrete (in front of the kerb) which is connected to 38mm diameter UPVC through-deck pipe. The through deck pipes are extended into drainage channel of the abutment bearing shelves. See the As-bulit Drawing 208/21/B5/2 for more bridge deck drainage details.

The drainage system in the abutment consists of 100x100mm drainage channel on the bearing shelf which feeds into 100mm dia. UPVC pipe through the abutment. The 100mm dia. UPVC pipe is connected to inspection chamber under the 200mm thick concrete slab in front of the abutment. See the As-bulit Drawing 208/21/B5/4 for more bridge deck drainage details.

There are linear drainage pipeworks with filter drain in the central reserve and verges of A303 carriageway on either end of the bridge. There are also linear drainage pipeworks with filter drain in the central reserve and verges of A303 carriageway at the two proposed crossover points. See the Survey Sketches HE570135-KIER-VGN-A303_MP67.0-SK-CB-0100 02, 03 & 04 for more highway drainage details near the Underbridge and at the potential crossover locations.

1.4 Geotechnical

No affect anticipated.

1.5 Soft Estate and Environment

The bridge is located in a rural environment over an unnamed road. There are soft verges at either ends of the structure.

There are soft central reserve and soft verges along the A303 carriageway at the two proposed crossover points.

1.6 Traffic Signs, Road Markings

There is a sign for parking place in the soft verge of eastbound carriageway close to the east end of the bridge. Road markings are present on both carriageways.

1.7 Lighting

Not applicable

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1.8 Expansion Joints

The structure comprises of a three span continuous reinforced concrete solid slab which is supported on reinforced concrete bankseat abutments via elastomeric bearings at either end and two intermediate piers comprising of four reinforced concrete columns. The bridge deck is simply supported on each abutment hence free to move on elastomeric bearings and existing Type 6 Elastomeric in Metal Runner joints were installed at both ends seal the joint gaps. The deck is also continuously supported over the intermediate piers consisting of fully encastre columns.

In addition, the structure comprises two independent decks which carry the WB and EA carriageway respectively. A longitudinal joint (L.J.) was installed the central reservation and consists of a 10-20mm wide gap (not clear in the as-built) filled with Ref. MJ/5 joint adjacent to the central reservation safety barrier.

1.9 Vehicle Restraint System

There is a steel type double sided Open Box Beam (OBB) VRS at the central reserve of the Section of A303 dual carriageway over the bridge. There are Expansion Joint Anchorages (E.J.A.) to the double sided OBB VRS at the transverse bridge expansion joint locations.

The As-built Drawing 208/21/B5/2 recorded the VRS post was at max.1200mm centres and its base plates were surface-mounted using 4no. M20 anchors. The as-built shows that the bottom side of concrete plinth at central reserve (only western half of central reserve which carries the VRS) was reinforced transversely using B785 steel mesh. It is also recorded in the as-built that the set-back of the VRS to the chainage line of the eastbound carriageway was 600mm and the level of the centreline of the OBB to the adjacent carriageway level was 610mm.

1.10 Tunnels

N/A

1.11 Technology

No affect anticipated.

1.12 Statutory Undertakers

C2 statutory undertaker's returns are provided in the Appendix B of the PCI Pack. C2 Stats search confirmed that Virgin Media, INSTALCOM and BT ducts running in the verge of the A303 westbound. C2 search also shows an SSE 33kv cable and BT cables buried under the east verge of the unnamed road below the bridge.

Refer to PCI document for location, hazards and method of working around apparatus.

1.13 Traffic

The A303 comprises a dual carriageway trunk road and each carriageway consists of 2 lanes with hard strip on either side. The traffic flows (AADTs) are 13082 for A303

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eastbound and 12954 for A303 westbound in 2018. The current speed limit is 70 MPH for A303 eastbound and westbound.

1.14 Asbestos

Asbestos Manage and Refurbishment surveys have been carried out on the top and underside areas respectively in 2017. The Refurbishment survey found no ACMs in the deck waterproofing, expansion joints on the Eastbound carriageway. No samples were taken from the waterproofing and joints on the Westbound carriageway in 2017 Survey. However, the 2018 AAP stated that it is presumed that the existing waterproofing (bituminous sheet) may contain chrysotile (white) asbestos. The existing Asbestos Survey Report (2017) and the AAP (2018) can be found in the PCI.

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