National Asset Delivery
Technical Surveys and Testing

Site Information for 570135
M5 91.5 Winnycroft Lane

1 SITE INFORMATION

1.1 Site boundary, extents and access arrangements

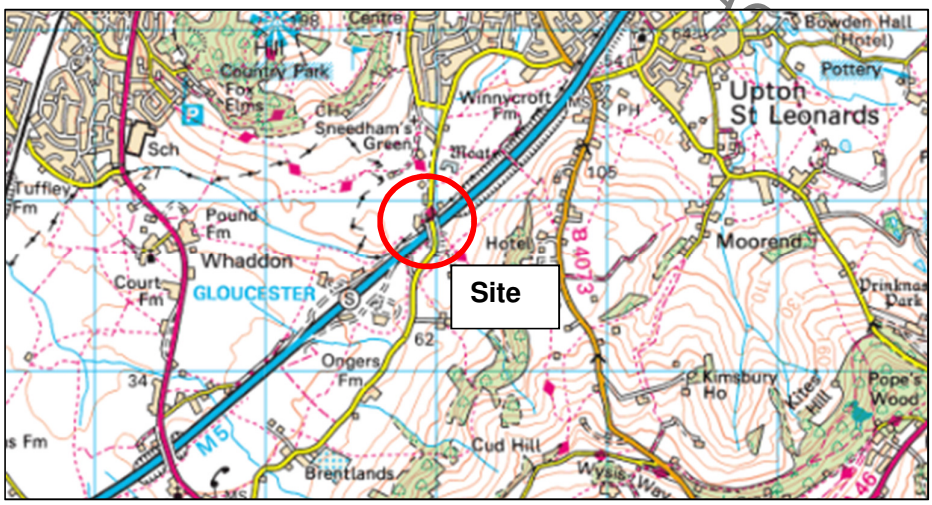
Winnycroft Lane carries the unclassified Winnycroft Lane over the M5 motorway at marker post 91.50 between Junction 11A and Junction 12. The structure is at Ordnance Survey Grid Reference: 384980, 213850. The bridge was constructed in 1970 and has a skew of 30 degrees. The deck comprises a four-span continuous voided reinforced concrete slab, supported at each end by 4 No. elastomeric bearings which rest on reinforced concrete skeleton abutments founded on spread footings. The intermediate piers are encastre with the concrete deck.

The bridge consists of four spans of length 14.83m, 21.25m, 21.25m and 14.83m giving an overall span of 72.15m. The carriageway width is 6.7m and each verge is 1.83m wide giving an overall width between the parapets of 10.36m

There is an Assessment certificate, dated 25/04/2002, which has been accepted by the TAA. The assessment confirmed that the structure was adequate for assessment live loading in combination with 32 units of HB loading.

The last major refurbishment of the bridge took place in 2001. As part of this scheme the expansion joints, deck and verge surfacing and waterproofing were replaced and an Open Box Beam (OBB) safety fence was provided to protect the substandard parapet. A holding down reinforced concrete slab was provided for the safety fence which covers the 686mm wide service bays under each verge.

Proposed investigation works will be carried out within the M5 motorway and the carriageway of Winnycroft Lane. Traffic Management arrangements will be required to ensure minimum disruption to the traffic. It is anticipated that all the top side works can be phased with single lane closures to Winnycroft Lane controlled by temporary traffic lights. Bottom side investigation works may require temporary lane closures on the M5. Phases and Traffic Management arrangement is to be provided by Highways England. Access to the deck soffit areas will require temporary access platform or MEWP. To avoid major disruption, it will be necessary to complete any works involving partial closure of the M5 during night time hours.



1.2 Pavement

Based on construction data, the carriageway surfacing consists of 45mm hot rolled asphalt, 20mm red sand asphalt and varying regulating layer. The construction of the verges consists of a 1161mm wide reinforced concrete 'holding down' slab for the open box beam safety barrier and 669mm of mass concrete infill.

1.3 Drainage

The existing drainage consists of surface water drainage – kerb channels, that relies on the crossfalls and longitudinal alignment of the highway on the bridge. It is assumed that the surface water runs from the footway and carriageway and then off the bridge deck into the gullies off the structure using the longitudinal fall of the deck. There are associated drainage pipes at the abutment and revetment allowing water to fall into the Highways England motorway drainage.

1.4 Geotechnical

N/A

1.5 Soft Estate and Environment

N/A

1.6 Traffic Signs, Road Markings

There are road markings on the structure indicating lane arrangement on the carriageway.

1.7 Lighting

There is no street lighting at site location.

1.8 Structures and Buildings

N/A

1.9 Tunnels

N/A

1.10 Technology

N/A

1.11 Statutory Undertakers

C2 statutory undertaker's returns can be found in drawing no. TOPO1250_M5-100-23147. The structure has a BT cable present in the service bay below the east verge. This BT cable emerges overhead to the North and the South of the structure.

Each service bay has a number of spare ducts present with 3 spare ducts in the East verge and 7 spare ducts in the west.

1.12 Traffic

M5 is a Motorway containing 3 lanes and a hard shoulder in each direction with an annual average daily flow of 81,660. Winnycroft Lane on top of the deck is an unclassified road comprising a single carriageway.