



M65 Terminus – Design Review Technical Note

DATE: 06 October 2023

INTRODUCTION

This technical note should be read alongside the WSP general arrangement drawing of the proposed M65 terminus, drawing 84465-WSP-XX-DR-004 rev P07. The note is intended to address the design rationale behind some of the key features of the design which have been discussed within post planning application consultation with National Highways.

SPEED REDUCTION MEASURES

An extension eastwards of the existing speed limit reduction to 50mph is proposed, and signage and road markings are shown well in advance of the signal stopline to indicate the commencement of the speed restriction. These are reinforced through repeater road markings.

Based on Traffic Signs Manual Chapter 6 paragraph 5.4.4. the use of Advanced Traffic Signal Warning signs should be considered to notify drivers approaching the roundabout of the upcoming signals. These signs are located circa 210m from the signal stop line to give drivers enough warning on their approach.

The use of high friction surfacing should be integrated in excess of the stopping distance of vehicles (53m), it is anticipated this would be installed up to circa 75m from the signal stop line. This could be coloured buff to provide an added visual reference for the upcoming junction.

LANE ALLOCATION SIGNAGE

Lane allocation signage is proposed on the approach to the stoplines, with initial signage around 550m prior to the stoplines to allow traffic to get in the correct lane in advance of the flare to three lanes. This is then repeated through road markings on the approach and through lane allocation signage on the gantries proposed both in advance of the stopline (within the two lane section) and then at the stopline itself (within the three lane section).

SPACE ALLOCATION FOR SIGNAGE AND GANTRIES

A spatial allocation for signage has been made within drawing 84465-WSP-XX-DR-004 rev P07. This shows fixed signage to scale, according to the sign widths within the signage schedule on the drawing. An additional allowance has been made for a 0.45m offset from the traffic signage to the back of the hard shoulder to allow clearance for any vehicles using the hard shoulder. In all cases the signage can be delivered within land either within National Highways or the applicants control.

Footprint zones for the proposed gantries have also been shown. These have been dimensioned at 2.5m x 2.5m, which includes an allowance for the gantry structure itself and for any vehicle restraint / barrier protection.

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TRAFFIC SIGNALS

Traffic signals on each approach arm would be positioned both at ground level (with visibility as shown on drawing 84465-WSP-XX-DR-004 rev P07, and on the gantry located immediately above the stopline.

The feasibility general arrangement has been reviewed for compliance against applicable guidance and standards, including the DfT's Traffic Signs Manual, DMRB CD 116 Geometric Design of Roundabouts and CD 123 Geometric Design of At-Grade Priority and Signal-Controlled Junctions.

The proposed layout has been modelled in LinSig and Vissim and is forecast to operate within operational capacity with no exceptional queuing or delay.

Generally, the arrangement is such that a compliant detailed design can be achieved, with the following considerations relating to the National Highways network:

- Visibility on the east arms (M6 and M65) approaches is considered to be achievable based on the visibility splays presented within drawing 84465-WSP-XX-DR-004 rev P07, with a specific signal head arrangement to be developed in consideration of the speed and alignment. Traffic signals positioned on the gantry immediately above the stopline could be used to provide additional signal visibility where needed. The use of louvres and secondary hoods should be considered on the signal heads to mitigate against the risk of any confusion between the different approaches. The use of physical screening could also be considered.
- All markings including arrows (lane and bifurcation), destination, hatching, yellow boxes, give ways and circulatory channelising are to be reviewed at detailed design.
- 'Traffic Signals Ahead' signs to Diagram 453 are to be considered on all approaches at detailed design noting the speed limits on the approaches.