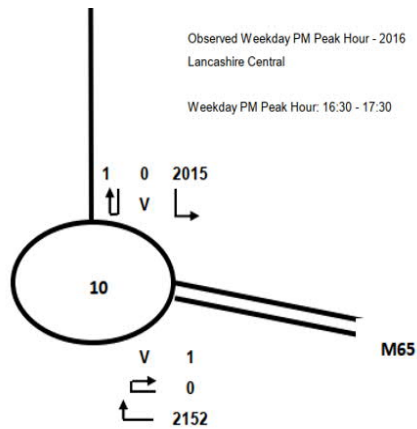
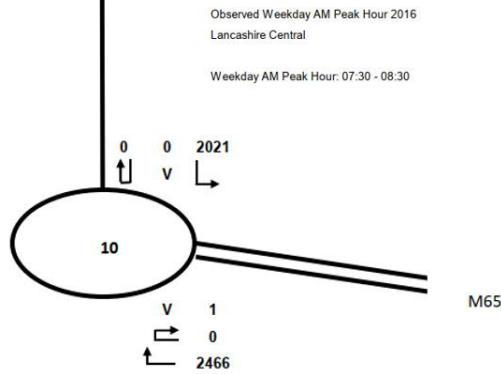


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This form shall be completed by the WCS Project Manager for both internally designed and Developer designed schemes. The purpose is to identify and record where a unique or specific situation with a project requires a non-standard level of design to be implemented, with an assessment of why and the associated risks and benefits. To be used in conjunction with the Departure from Standard procedure contained within the Local Operating Procedures (LOPs) (Sect 9.7.4.5 Departure from Standards)

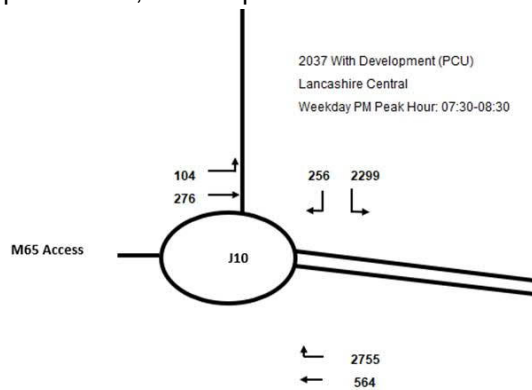
Scheme Title:	M65 Terminus
Location:	M65 Terminus, Preston PR5 6BD
Design Specialism:	Highways

1) Project Details			
Description	<p>The proposed development at Lancashire Central includes a mix of land uses including employment, retail, leisure, health and residential use, with associated parking, green infrastructure, internal highway layout and pedestrian and cycle infrastructure provision. The M65 terminus roundabout is to be modified to provide a safe and suitable access to the proposed Lancashire Central development. An additional separated arm is to be added to the M65 terminus on the western side taking traffic from the M65 and M6 Junction 29 separately, and the roundabout is to become signalised. See drawing 84465-WSP-XX-DR-0004 rev P07 for details.</p> <p>The M65 terminus roundabout adjacent to the site boundary is at the western extent of the M65. The M65 terminus is currently a two-arm roundabout, with the M65 as the eastern arm and the link between the M65 and the A6 / A582 roundabout as the northern arm.</p> <p>There are two circulating lanes, however traversing the northern circulating carriageway is prohibited, with no entry to vehicles between the exit onto the link to the A6, and the entrance from the link from the A6.</p> <p>There is an existing DVSA check site located between the eastbound and westbound carriageways of the M65. Access and egress to and from the DVSA Enforcement check site is from the roundabout with the entrance located between the entrance arm of the M65 and the exit arm of the M65.</p>		
Road No:	M65	Category:	Road Layout
Traffic Flows	<p><u>Observed</u></p> <p>In 2016, the recorded turn count at the M65 terminus roundabout was 4,487 AM peak and 4,167 PM peak.</p>	NMU flows	<u>N/A</u>



Design Year

Future year flow of 2037 with the development traffic incorporated. The recorded turn count at the M65 terminus roundabout was 6,254 AM peak and 5,980 PM peak.

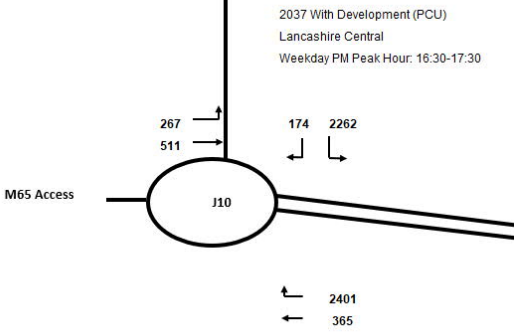


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	 <p>2037 With Development (PCU) Lancashire Central Weekday PM Peak Hour: 16:30-17:30</p> <p>267 511 M65 Access</p> <p>J10</p> <p>174 2262</p> <p>2401 365</p> <p>The AM and PM traffic flows used in the 2037 with development LinSig modelling for this junction is as per the below;</p> <p>AM PEAK M65 east approach (from M65) – 2,136 PCU M65 east approach (from M6) - 1,183 PCU</p> <p>PM PEAK M65 east approach (from M65) – 1,030 PCU M65 east approach (from M6) – 1,737 PCU</p>		
<p>Design speed and speed limit</p>	<p>The existing speed limit on the M65 westbound is 70mph on the approach to the area, falling to 50mph just prior to the merge between M65 westbound traffic and traffic approaching from the M6 northbound and M6 Junction 29 roundabout.</p> <p>As part of the proposed scheme, the extent of 50mph limit would be extended to begin approximately 350m prior to the merge of the M65 and M6 traffic. There will also be a further reduction in speed limit to 40mph on approach of the traffic signals.</p> <p>The Design Speed of the M65 and M6 traffic has therefore been assessed as 85kph.</p>		
<p>Mean and 85th Speeds</p>	<p>Not available at current design stage.</p>		

2) Departure Details

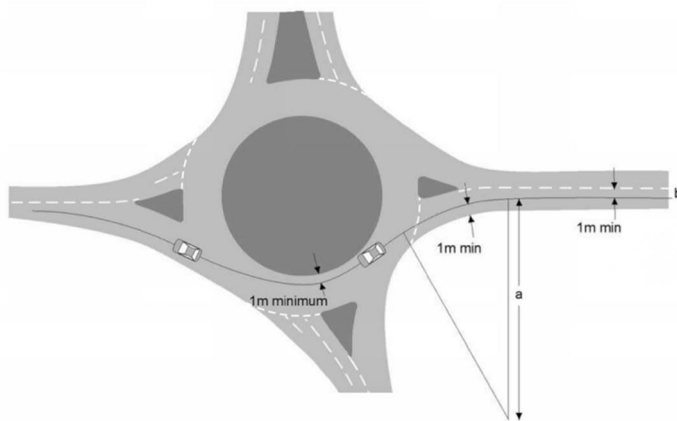
Relevant Standards affected (reference must be made to the specific & relevant paragraphs). *If "Approval in Principle" documentation is used, supply document reference*

Clause no.:

CD 116 Clause 3.20/3.26

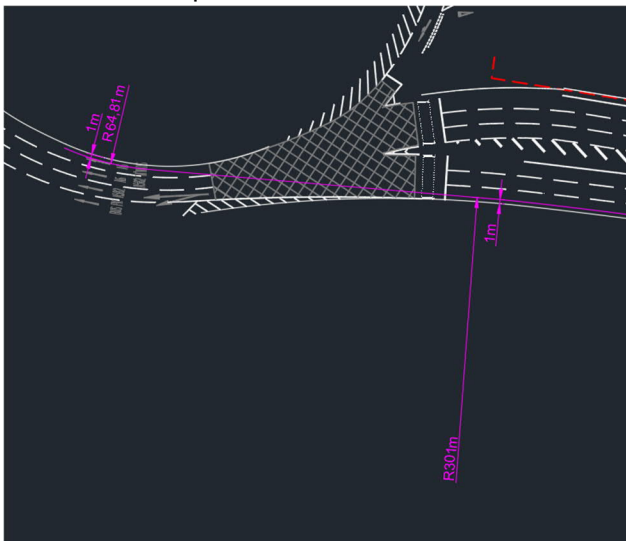
CD 116 provides requirements for the geometric design of roundabouts. Section 3 relates to the main geometric design features of a roundabout and gives specific dimensions to various design aspects of a roundabout. Clause 3.20 states *'The entry path radius for an ahead movement at a 4-arm roundabout shall be determined as shown on Figure 3.20 (below).'*

Figure 3.20 Determination of entry path radius for ahead movement at a 4-arm roundabout



Clause 3.26 states *'At normal roundabouts, the entry path radius shall not exceed 100 metres.'* This entry path radius is defined as 'a' in the figure above. The entry path radius is measured as the smallest best fit circular curve over a distance of 25m occurring along the approach entry path in the vicinity of the give way line, but not more than 50m in advance of it. Appendix A of CD 116 provides more advice on constructing the entry path radius on the design proposals.

The screenshot below shows the entry path radius of the proposed approach to be 301m. This does not meet the requirements set out in Clause 3.26 and therefore a departure is required.



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<i>Difference between standard and proposed design:</i>	<p>The proposed design is shown on drawing 84465-WSP-XX-DR-0004 P07.</p> <p>There is a site boundary of the existing DVSA site to the north of the scheme providing a physical constraint that cannot be adjusted.</p> <p>This limits the space available for the M65 approach which we have positioned as close as reasonably practicable to the existing site boundary.</p> <p>This in turn further constrains the M6 approach due to the offsets required to safely separate the two approaches leaving enough room for gantry foundations/VRS etc. Therefore, the M6 approach must be aligned as shown on the attached drawing which does not comply with the standards.</p> <p>The non-compliance entry path radius could potentially increase vehicle speed when entering the roundabout. This gives road users less time to react when changing lanes or as traffic signals change.</p>
<i>Reason for Departure (overview):</i>	<p>This departure is required to facilitate the M6 approach carriageway onto the roundabout as there is insufficient land available to the north to meet the horizontal alignment requirements set out above.</p> <p>There is no scope to realign both the M6 and the M65 within the existing site constraints.</p>
<i>Associated Project Departures:</i>	<p>Departure 1 – Gantry Mounted Directional Signage</p> <p>The design proposal is to incorporate gantry mounted directional signage on the approach to the M65 terminus roundabout. This does not meet the design criteria defined above as the separated carriageways the gantries would span only have two running lanes. A departure from standard is required for non-compliant gantry mounted signs.</p>
<i>Other options considered:</i>	<p>There is a separate design option of this scheme which consists of a merged approach to the roundabout from the M65 and M6. This omits any confusion as the M6 / M65 traffic merges prior to the roundabout, where it follows the same advanced directional signage.</p> <p>The proposed alternative drawing arrangement is shown on drawing number 84465-WSP-XX-DR-0019 P04.</p> <p>This option is being progressed in parallel to this design option.</p>

3) Justification (Positive and Negative Impacts and Risk)	
<i>Safety</i>	<p>Due to the land available is it not possible to increase the entry path deflection to meet the design criteria. The site constraints</p>

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	<p>do not allow the carriageways to be realigned to meet the required standards.</p> <p>A further reduction in speed limit from 50mph to 40mph is proposed approximately 150m from the stop lines. This is to give road users more time to anticipate and react to the traffic signals.</p> <p>As a result of this the speed limit of the approach has been reduced to 40mph and the junction is to be signalised to further encouraged reduced speed on approach. The signals will be gantry mounted.</p> <p>A stage 1 road safety audit has been received and the comments received related to the scheme's signage and road marking strategy. The addendum to the road safety audit was received 23/07/23 and the design drawing (84465-WSP-XX-DR-004) has been updated to incorporate the safety concerns raised in the audit report.</p>
<i>Congestion/delay</i>	<p>The proposed layout of the M65 terminus has been tested using both LinSig and VISSIM modelling software for the AM and PM peak hours with the proposed development traffic and a future assessment year of 2037.</p> <p>Traffic modelling suggests that with the development traffic and the proposed scheme, there is a forecast queue of approximately 70–110m on each of the separated approaches on the M65 arm (eastern approach), in the AM and approximately 60-70m on the eastern approaches in the PM peak periods.</p>
<i>Environmental/Sustainability</i>	N/A
<i>Cost saving or benefit for departure: (Capital and Whole life Cost/Value)</i>	N/A
<i>Accessibility</i>	N/A
<i>Integration</i>	N/A
<i>Structural</i>	N/A
<i>Network Resilience & Maintenance</i>	N/A

4) Compensatory Measures	
<i>Included Measures</i>	Advanced signage details can be found on drawing 84465-WSP-XX-DR-0004 rev P07.

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<i>Rejected Options</i>	N/A
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5) Attachments and other information																																									
<i>List of Attachments</i>	GA / Visibility splays shown on drawing 84465-WSP-XX-DR-0004 rev P07.																																								
<i>Consultations</i>	Stage 1 RSA, appended to departure application.																																								
<i>Other Information</i>	<p>Transport Assessment.</p> <p>Accident data below:</p> <p>Collision data for this junction is included within Appendix B of TA (Table 36) - Only one slight collision has occurred at this junction in the five-year period of collision data:</p> <p>Table 36: Severity & Year of Collision on Junction 10 M65 Roundabout</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="color: red;"> <th>Severity</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td><i>Slight</i></td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td><i>Serious</i></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td><i>Fatal</i></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr style="font-weight: bold;"> <td>Total</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>1</td> </tr> </tbody> </table> <p>Source: Lancashire Central PIA Stats</p> <p>Observed Traffic data has been appended to Transport Assessment (Appendix G).</p>	Severity	2016	2017	2018	2019	2020	2021	Total	<i>Slight</i>	0	0	0	1	0	0	1	<i>Serious</i>	0	0	0	0	0	0	0	<i>Fatal</i>	0	0	0	0	0	0	0	Total	0	0	0	1	0	0	1
Severity	2016	2017	2018	2019	2020	2021	Total																																		
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<i>Serious</i>	0	0	0	0	0	0	0																																		
<i>Fatal</i>	0	0	0	0	0	0	0																																		
Total	0	0	0	1	0	0	1																																		

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6) Design Organisation's concluding remarks

To conclude the above, the departure application has been submitted due to the proposal to put gantries over 2No carriageways with two running lanes. CD 146 Clause 3.9 states gantries shall be proposed over carriageways with 3 or more lanes. The gantries have been proposed to reduce driver confusion and improve destination clarity. The omission of the gantries would create confusion with the Advanced Directional Signage and which carriageway they relate to resulting in driver hesitation and late braking.