

December 2023

London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

Volume 8 Additional Submissions (Examination)

**8.140 Applicant's Response to Issue Specific Hearing 4
Action 7 - Update on M1 Junction 10 Road Safety Audit**

Infrastructure Planning (Examination Procedure) Rules 2010

Application Document Ref: TR020001/APP/8.140

The Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

**London Luton Airport Expansion Development Consent
Order 202x**

**8.140 APPLICANT'S RESPONSE TO
ISSUE SPECIFIC HEARING 4 ACTION 7 –
UPDATE ON M1 JUNCTION 10 ROAD SAFETY AUDIT**

Deadline:	Deadline 6
Planning Inspectorate Scheme Reference:	TR020001
Document Reference:	TR020001/APP/8.140
Author:	Luton Rising

Version	Date	Status of Version
Issue 1	December 2023	Additional Submission - Deadline 6

Contents

	Page
1 Introduction	1
1.2 M1 Junction 10	1
References	2
APPENDIX A – Draft Stage 1 RSA Designer's Response M1 Junction 10	3

1 INTRODUCTION

1.1.1 This note has been prepared to provide an update to the Examining Authority (ExA) regarding Issue Specific Hearing 4 (ISH4) Action 7, in relation to the progress on completing the M1 Junction 10 Stage 1 Road Safety Audit (RSA1). Action 7 states: *“Provide on-going updates regarding progress of the road safety audits, including for the strategic road network (SRN) and in particular whether they would require additional land to be compulsory acquired.”*

1.2 M1 Junction 10

1.2.1 A Stage 1 RSA is required to be completed on the basis of the proposed highway mitigation designs shown in drawings LLADCO-3C-ARP-SFA-HWM-DR-CE-0009, -0024/25 and -0029/30, as contained within **Appendix A** of the **Transport Assessment Appendices - Part 1 of 3 (Appendices A to E) [APP-200]**.

1.2.2 The proposals form a three-stage approach to mitigation at M1 Junction 10, with works proposed at all three Assessment Phases of the Proposed Development. All three stages of the works will be assessed as part of the RSA.

1.2.3 An audit brief has been developed in conjunction with National Highways (NH), and this has been agreed and signed off by NH on 5 November 2023. The audit team was approved by NH, and the safety audit was subsequently undertaken on 10 November 2023.

1.2.4 In order to satisfy the requirements of Design Manual for Roads and Bridges (DMRB) GG119 'Road Safety Audit' guidance (Ref 1), it will be necessary to engage further with NH (an Overseeing Organisation) in order to agree the proposed actions in response to the issues raised within the audits. This engagement process was started following completion of the RSA, with a draft designer's response issued to NH on 1 December 2023. The draft version of the designer's response to the audit is appended to this document (**Appendix A**).

REFERENCES

Ref 1 'GG119- Road safety audit', Revision 2 (January 2020), Design Manual for Road and Bridges, National Highways

APPENDIX A – DRAFT STAGE 1 RSA DESIGNER'S RESPONSE M1 JUNCTION 10

Contents

	Page	
1	Project Details	1
2	Introduction	2
2.1	Stage 1 Road Safety Audit	2
2.2	Key Personnel	3
3	Items Resulting from the Stage 1 RSA Audit	4
3.2	Design Organisation and Overseeing Organisation Statements	8

Tables

Table 1.1: Project Details

Table 1.2: Authorisation Sheet

Table 2.1: Key Personnel

Table 3.1: Road Safety Audit Decision Log

Table 3.2: Design Organisation Statement

Table 3.3: Overseeing Organisation Statement

Figures

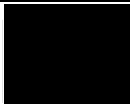
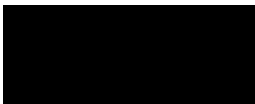
Figure 2.1: Locations of Problems Identified within the Audit

1 PROJECT DETAILS

Table 1.1: Project Details

Report title:	Stage 1 Road Safety Audit Designer's Response - M1 Junction 10
Date:	December 2023
Document Reference and Revision:	TR020001/APP/8.140
Prepared by:	Neil Scott
On behalf of:	Luton Rising

Table 1.2: Authorisation Sheet

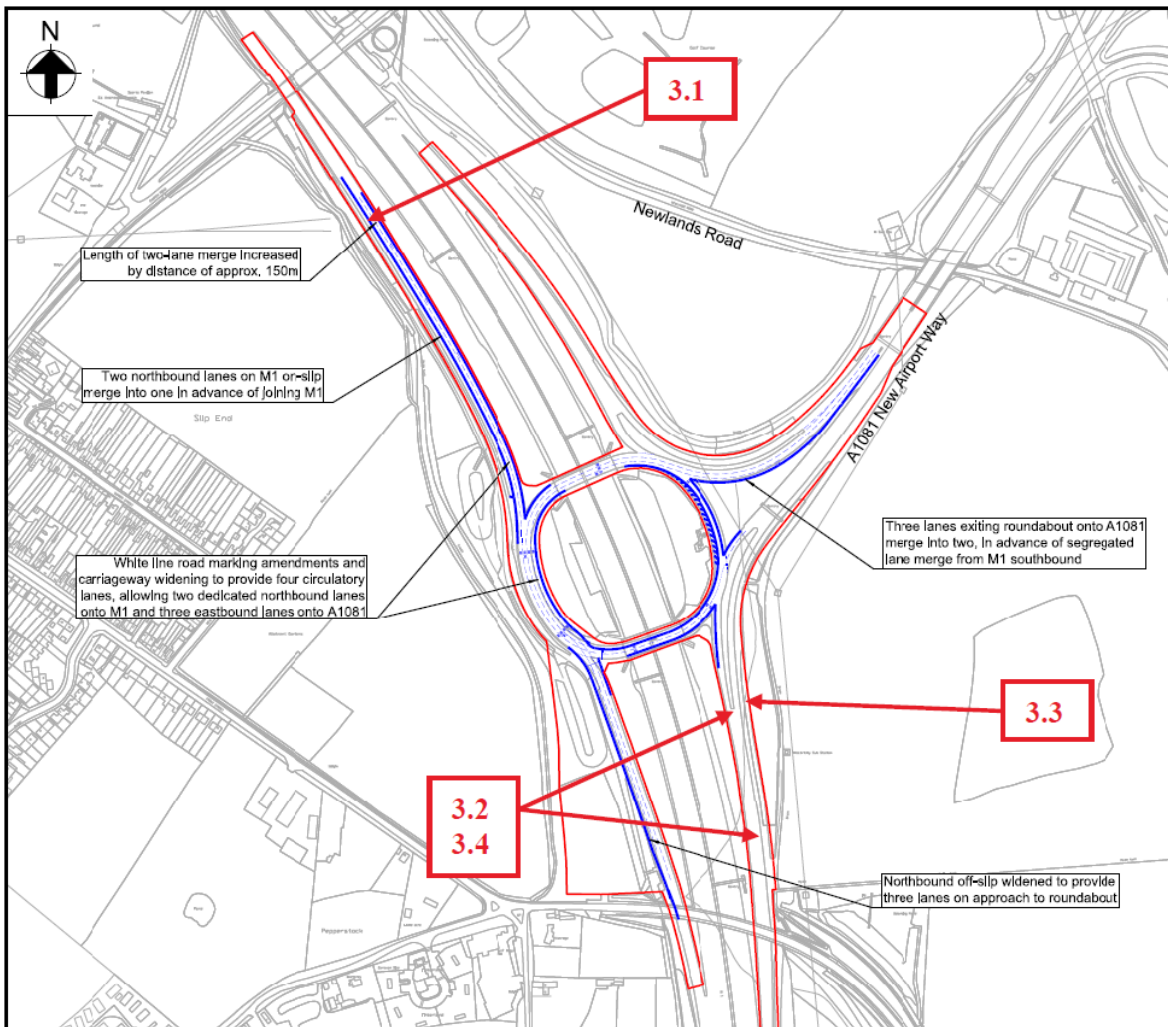
Project:	Luton Airport
Report title:	Stage 1 Road Safety Audit Designer's Response - M1 Junction 10
Prepared by:	
Name:	Neil Scott
Position:	Senior Technician
Signed:	
Organisation:	Arup
Date:	December 2023
Approved by:	
Name:	Jagjit Riat
Position:	Associate Director
Signed:	
Organisation:	Arup
Date:	December 2023

2 INTRODUCTION

2.1 Stage 1 Road Safety Audit

- 2.1.1 This draft Designer's Response report has been compiled to summarise the recommendations of the Stage 1 Road Safety Audit (RSA) undertaken by Ove Arup and Partners on Monday 10th November 2023, for the proposed mitigation design at M1 Junction 10. It is appended to the Applicant's Response to Issue Specific Hearing 4 (ISH4) Action 7 – Update on M1 Junction 10 Road Safety Audit.
- 2.1.2 The audit was undertaken on the basis of the proposed highway mitigation designs shown in drawings LLADCO-3C-ARP-SFA-HWM-DR-CE-0009 (Assessment Phase 1), LLADCO-3C-ARP-SFA-HWM-DR-CE-0024 & 0025 (Assessment Phase 2a) and LLADCO-3C-ARP-SFA-HWM-DR-CE-0029 & -0030 (Assessment Phase 2b) as contained within **Appendix A** of the **Transport Assessment Appendices- Part 1 of 3 (Appendices A to E) [APP-200]**.
- 2.1.3 The report sets out the problems, summary and recommendations of the audit undertaken by Arup, together with the designer's response. The locations of the problems identified within the audit are shown below, in Figure 2.1.

Figure 2.1: Locations of Problems Identified within the Audit



2.2 Key Personnel

Table 2.1: Key Personnel

Overseeing Organisation:	Jeremy Bloom - National Highways
RSA Team:	Ema Jones - Arup Anna Goldie - Arup
Design Organisation:	Neil Scott - Arup (Luton Rising) Jagjit Riat - Arup (Luton Rising) Robert Blair - Arup (Luton Rising)

3 ITEMS RESULTING FROM THE STAGE 1 RSA AUDIT

3.1.1 The following sections provide detail on the audit recommendations and actions.

Table 3.1: Road Safety Audit Decision Log

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
3.1	<p>Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0009 indicates that the length of the two-lane merge is to be extended by 150m. This may result in forward visibility of the merge point being compromised by an existing hidden dip in the northbound on-slip.</p> <p>This problem increases the risk of side swipe and loss of control type collisions.</p>	<p>Ensure that sufficient forward visibility of the merge is maintained.</p>	<p>Accepted. Forward visibility would be checked at the detailed design stage to ensure that appropriate visibility of the merge is maintained.</p>	<p>Response to be completed following engagement with NH</p>	<p>Agreed action to be completed following engagement with NH</p>
3.2	<p>The brief provided for Road Safety Audit did not identify any departures from standard, however an offside merge has been proposed on the southbound on-slip in both phases 2a and 2b.</p> <p>This arrangement may increase the risk of road user confusion and it may be difficult for road users to</p>	<p>Rearrange the proposed junction arrangement to eliminate the off-side merge.</p>	<p>Accepted. The proposed design of the merge could be amended to be a nearside merge. Alternatively, the exit lane off the circulatory could be removed as this would only serve errant vehicle</p>	<p>Response to be completed following engagement with NH</p>	<p>Agreed action to be completed following engagement with NH</p>

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	<p>merge into the segregated left turn lanes coming from the A1081. Road users may slow or stop when trying to merge, increasing the risk of shunt type collisions with other road users heading southbound from the roundabout or shunt, sideswipe and loss of control type collisions with road users in the segregated left turn lanes.</p>		<p>movements i.e. M1 'U' turners or southbound vehicles that exit at J10 and then rejoin the M1 southbound carriageway. Almost all the vehicles using the southbound on-slip would be from the A1081 and would use the segregated left turn lanes. These alternatives do not affect the design principles of the proposals and would be investigated further with National Highways at the detailed design stage.</p>		
3.3	<p>In Phase 2a and Phase 2b a two lane segregated left turn from the A1081 onto the M1 southbound slip road has been proposed. The existing southbound lane from the M1 J10 roundabout is proposed</p>	<p>Provide sufficient intervisibility between the merge and segregated left turn lanes.</p>	<p>Accepted. See above response to Item 3.2 regarding the design or removal of the merge.</p>	<p>Response to be completed following engagement with NH</p>	<p>Agreed action to be completed following engagement with NH</p>

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	<p>to join the segregated lanes with a short length of off-side merge. No details regarding infrastructure or stopping sight distances have been provided.</p> <p>Items such as VRS and signs between the segregated left turn lanes and off-side merge may obscure visibility for road users. This issue may increase the risk of side swipe, shunt, and loss of control type collisions.</p> <p>This problem may be exacerbated due to the short merge length (See Problem 3.4) and potential difference in speed between merging road users and those in the segregated left turn lanes.</p>		<p>If the exit off the circulatory is retained, there is scope to amend the alignment of the segregated left turn and separating island in order to accommodate potential VRS, signage and visibility requirements. This would be addressed at the detailed design stage.</p>		
3.4	<p>In Phase 2a a two-lane segregated left turn from the A1081 onto the M1 southbound slip road has been proposed. The existing southbound lane from the M1 J10 roundabout is proposed to join the segregated lanes</p>	<p>Ensure that sufficient road space is provided for road users to safely merge.</p>	<p>Accepted. See above response to Item 3.2 regarding the design or removal of the merge.</p>	<p>Response to be completed following engagement with NH</p>	<p>Agreed action to be completed following engagement with NH</p>

Ref.	RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	<p>with a short length of off-side merge, this merge is followed immediately by a section of informal two-lane merge in advance of joining the main carriageway on the M1. Insufficient road space for the merges may increase the risk of side swipe and loss of control type collisions.</p>		<p>It is noted that the proposed amendments to the white lining south of the offside merge increase the width of the on-slip as well as the overall merging length with the mainline by some 175m. The width of the slip is sufficient to extend the white lining to formalise the two lane section beyond that shown on the existing drawings and to extend the two lane section prior to the secondary merge. This can be addressed as part of the detailed design.</p>		

3.2 Design Organisation and Overseeing Organisation Statements

Table 3.2: Design Organisation Statement

<p>On behalf of the design organisation I certify that:</p> <p>1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation</p>	
Name:	Jagjit Riat
Signed:	To be added at final agreed report stage
Position:	Associate Director
Organisation:	Arup
Date:	To be added at final agreed report stage

Table 3.3: Overseeing Organisation Statement

<p>On behalf of the Overseeing Organisation I certify that:</p> <p>1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and</p> <p>2) the agreed RSA actions will be progressed.</p>	
Name:	Jeremy Bloom
Signed:	To be added at final agreed report stage
Position:	To be added at final agreed report stage
Organisation:	National Highways
Date:	To be added at final agreed report stage