M & S Traffic

Road Safety Audit Stage 1

Proposed Site Access

Durrington Police Station

Littlehampton Road

Durrington

West Sussex

Date: 23rd March 2023

Report produced for: Paul Basham Associates

Report produced by: M & S Traffic

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Report Title Road Safety Audit Stage 1

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Revision	Martin Morris	Bryan Shawyer	[redacted]	23rd March 2023
Designers Response	Caitlin Turley	Tom Fisher		06th September 2023
Authority Response				

Distribution

Organisation	Contact	Copies
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1 INTRODUCTION

1.1 This report describes a Stage 1 Road Safety Audit carried out on a proposed priority junction access arrangement on the A2032 Littlehampton Road, Durrington as detailed in the Road Safety Audit Brief below:

- Creation of a new bellmouth access from the existing police site onto the A2032 to enable the wider site to be separated. Scoping discussions have been held with WSCC highways, who confirm that the speed limit should remain at 50mph. The existing pedestrian and cycle route is being maintained and a cycle / pedestrian crossing has been provided in line with LTN 1/20. As this is a dual carriageway, it would be left turn in and out only. There would be no through route through the site, which would be restricted by retractable bollards. Existing site exceeds 600 AADT therefore taper has been provided at the exiting the site (CD123). AADT on A2032 exceeds 7,000 therefore taper lengths on entry provided in line with CD123.
- A pedestrian refuge island.

The Audit was requested by the design organisation, Paul Basham Associates, Paul Basham Associates, Lancaster Court, 8 Barnes Wallis Road, Segensworth, Fareham PO15 5TU on behalf of West Sussex County Council, as the Highway Authority.

1.2 The Audit Team membership was as follows:

Audit Team Leader
Martin Morris, PGD, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency

Audit Team Member
Bryan Shawyer B.Eng. (Hons), MSc, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency

1.3 The audit was undertaken following the principles of GG 119, The Design Manual for Roads and Bridges. The documents available at the time the report was compiled are detailed in Appendix A.

1.4 The Audit took place at the Gillingham offices of M&S Traffic in March 2023 and comprised an examination of the documents provided as listed in Appendix A, plus a joint visit to the site of the proposed scheme on the 21st March 2023 between 12:00 and 12:45. Weather conditions at the time were overcast and the road surface was dry. Traffic flows were low and free flow speeds were moderate to high. Low level pedestrian and cyclist movements observed during the site visit.

1.5 The report has been compiled, only with regards to the safety implications for road users of the layout presented in the supplied drawings. It has not been examined or verified for compliance with any other standards or criteria. This safety audit does not perform any “Technical Check” function on these proposals. It is assumed that the Project Sponsor is satisfied that such a “Technical Check” has been successfully completed prior to requesting this safety audit.

1.6 The auditors have not been informed of any Departures from Standards in this scheme construction.

1.7 All comments and recommendations are referenced to the detailed drawings and the locations have been detailed relating to the plans supplied with the audit brief, Appendix B.

2 SAFETY ISSUES RAISED AT PREVIOUS AUDITS

2.1 No previous Audits were supplied for assessment.

3 ITEMS RAISED AT THE STAGE 1 AUDIT

3.1 General

3.1.1 PROBLEM

Location: Proposed retractable bollards.

Summary: Insufficient construction details could compromise road safety.

At this early stage no details of the retracting bollards have been provided for assessment, and whether these bollards are automatic or manually retracting. Signing arrangements could also change with the bollard type, and road safety could be compromised.

RECOMMENDATION

It is recommended that, details should be provided at Stage 2 Safety Audit where, signing, bollard type and operation details should be provided.

3.1.2 PROBLEM

Location: Proposed access.

Summary: Ponding of surface water could lead to loss of control accidents.

At this early stage of design, no details of carriageway drainage or carriageway vertical profiles have been provided for assessment. Ponding on the carriageway or water moving across the carriageway at junctions could lead to loss of control collisions.

RECOMMENDATION

It is recommended that drainage details should be provided at Safety Audit Stage 2, or that the carriageway should be shaped so that the highway drains.

3.2 Local Alignment

3.2.1 No comment.

3.3 Junctions

3.3.1 No comment.

3.4 Non-Motorised User Provision

3.4.1 PROBLEM

Location: The scheme,

Summary: High speed road and lack of buffer zone could lead to cyclist collisions.

Whilst it is recognised that the existing unsegregated footway/cycleway has no buffer the posted speed limit on the A2032 is 50mph, where no buffer is proposed. There is concern that the lack of a buffer between the high-speed road and the route, cyclists may be intimated and susceptible to being struck by passing vehicles.

RECOMMENDATION

It is recommended that a buffer should be applied between the unsegregated route or that the footway cycleway should be widened, further it is suggested that this is in conjunction with West Sussex County Council who may wish to install a buffer on the remainder of the route.

3.5 Road Signs, Carriageway Markings and Lighting

3.5.1 PROBLEM

Location: Opposite the proposed junction on the A2032.

Summary: Lack of signage could lead to swerving and loss of control or head on collisions.

There is no signing opposite the egress to indicate that traffic must turn left only. Vehicles could turn right and be in conflict with vehicles travelling in the opposite direction. This could lead to swerving and loss of control or head on collisions.

RECOMMENDATION

It is recommended that signage to diagram 610 (vehicles must proceed left) should be provided opposite the access.

4 ISSUES IDENTIFIED DURING THE STAGE 1 AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

4.1 Any issues that the Audit Team wish to bring to the attention of the Client Organisation, which are not covered by the road safety implications of this audit have been included in the following section. These issues could include maintenance items, operational issues, or poor existing provision. It should be understood however, that in raising these issues, the Audit Team do not warrant that a full review of the existing highway environment has been undertaken beyond the scope of the audit.

4.2 The Audit Team had no issues to raise within this section.

5 AUDITOR TEAM STATEMENT

5.1 We certify that this audit has been carried out following the principles of GG 119.

Audit Team Leader

Martin Morris
PGD, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency

Signed: [redacted] Date: 22/03/2023

Audit Team Member

Bryan Shawyer
BEng (Hons), MSc, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency

Signed: [redacted] Date: 23/03/2023

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APPENDIX A

List of drawings and documentation submitted for auditing:

Drawing Number	Title
183.0002.001 D	PROPOSED ACCESS DESIGN EXISTING 50MPH SPEED LIMIT
183.0002.002 C	VISIBILITY SPLAYS EXISTING 50MPH ACCESS DESIGN
183.0002.007 C	FIRE, REFUSE AND DELIVERY VEHICLE SWEPT PATH ANALYSIS
183.0002-0009	ADOPTION PLAN
183.0002-0011	PROPOSED RETRACTING BOLLARDS AND SIGNAGE

Supporting Documentation:

- Road Safety Audit Brief PBA February 2023.
- Footway and cycle counts March 2022.
- Email PBA 23rd March 2023

APPENDIX B

Plan attached showing the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).

APPENDIX C: Road Safety Audit Decision Log.

Auditors: Martin Morris (Team Leader) and Bryan Shawyer (Team Member).

Scheme: Proposed Site Access Durrington Police Station, Littlehampton Road.

Date Audit Completed: 23rd March 2023

This response is to a Stage 1 Road Safety Audit to the design standard detailed within GG 119 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

RSA Problem	RSA Recommendation	Design Organisation response)	Overseeing Organisation response	Agreed RSA action
3.1.1 **PROBLEM** **Location**: Proposed retractable bollards. **Summary:** Insufficient construction details could compromise road safety. At this early stage no details of the retracting bollards have been provided for assessment, and whether these bollards are automatic or manually retracting. Signing arrangements could also change with the bollard type, and road safety could be compromised.	It is recommended that, details should be provided at Stage 2 Safety Audit where, signing, bollard type and operation details should be provided.	Agreed - At this stage the exact specification of bollard is not yet known, however it is anticipated to be a manual retracting bollard. Full details will be provided as part of any future Stage 2 RSA.	The type and specification for the bollard can be agreed as part of the detailed design.	No further action required at this stage. The type of bollard can be agreed through the detailed design.
3.1.2 **PROBLEM** **Location**: Proposed access.	It is recommended that drainage details should be provided at Safety Audit Stage 2, or that	Agreed – A complete drainage design will be submitted through the detailed design stage. The existing drainage is facilitated through channel / kerb	The drainage design will be agreed as part of the detailed design.	No further action required at this stage.

Summary: Ponding of surface water could lead to loss of control accidents. At this early stage of design, no details of carriageway drainage or carriageway vertical profiles have been provided for assessment. Ponding on the carriageway or water moving across the carriageway at junctions could lead to loss of control collisions.	the carriageway should be shaped so that the highway drains.	drainage. It is anticipated that additional gullies will be used to ensure that all water is kept within the new junction and does not effect the main carriageway.		The drainage design is to be agreed as part of the detailed design.
3.4.1 **PROBLEM** **Location:** The scheme, **Summary:** High speed road and lack of buffer zone could lead to cyclist collisions. Whilst it is recognised that the existing unsegregated footway/cycleway has no buffer the posted speed limit on the A2032 is 50mph, where no buffer is proposed. There is concern that the lack of a buffer between the high-speed road and the route, cyclists may be intimated and susceptible to being struck by passing vehicles.	It is recommended that a buffer should be applied between the unsegregated route or that the footway cycleway should be widened, further it is suggested that this is in conjunction with West Sussex County Council who may wish to install a buffer on the remainder of the route.	Given the shared cycle/footway is existing and there is no evidence of accidents along this section of road, no buffer or railings has been incorporated into the design. However, the existing hatching present along the carriageway would be maintained.	An area of hatching is provided within the carriageway that provides a buffer between traffic and those using the existing shared use route. As such no further buffer is needed. As part of the detailed access design, the existing hatching should be maintained. It's accepted that this may not need to extend into the access itself.	No further action required at this stage. The extent of buffer/hatching alongside the existing cycleway is to be agreed as part of the detailed design.

3.5.1 **PROBLEM** **Location:** Opposite the proposed junction on the A2032. **Summary:** Lack of signage could lead to swerving and loss of control or head on collisions. There is no signing opposite the egress to indicate that traffic must turn left only. Vehicles could turn right and be in conflict with vehicles travelling in the opposite direction. This could lead to swerving and loss of control or head on collisions.	It is recommended that signage to diagram 610 (vehicles must proceed left) should be provided opposite the access.	Agreed - The plans have been updated to show Diagram 609 on the central refuge and opposite the junction on the reservation to instruct drivers.	The Designers Response is noted. No further action required.	No further action required.

APPENDIX D: DESIGN ORGANISATION STATEMENT

PROJECT NAME: Stage 1 Proposed Site Access Durrington Police Station, Littlehampton Road.	
On behalf of the Design Organisation, I certify that: **1) The actions identified in response to the problems raised in this RSA have been discussed and agreed with the Overseeing Organisation**	
Name	Caitlin Turley
Signed	[redacted]
Position	Principal Transport Planner
Organisation	**Paul Basham Associates Ltd**
Date	06.09.23

APPENDIX E: OVERSEEING ORGANISATION STATEMENT

PROJECT NAME: Stage 1 Proposed Site Access Durrington Police Station, Littlehampton Road.	
On behalf of the Overseeing Organisation, I certify that: **1) The actions identified in response to the problems raised in this RSA have been discussed and agreed with the Design Organisation; and** **2) The agreed RSA actions will be progressed.**	
Name	Ian Gledhill
Signed	[redacted]
Position	Principal Planner – County Highways
Organisation	West Sussex County Council
Date	8th September 2023