

Road Safety Audit Stage 1

B3078 Cycle Link Scheme

Fordingbridge

Hampshire

Date: 19th June 2024

Report produced for: Paul Basham Associates

Report produced by: M & S Traffic

Registered Office: 32 Hamelin Road, Gillingham, Kent ME7 3EX Registered in Cardiff No:06730905

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Project Title B3078 Cycle Link Scheme

Report Title B3078 Cycle Link Scheme, Fordingbridge

Road Safety Audit Stage 1

Status Final

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Original	Martin Morris	Bryan Shawyer	A. Mas	19 th June 2024
Designers Response	James Rand		JR	2 nd July 2024
Authority Response				

Distribution

Organisation	Contact	Copies
Paul Basham Associates	James Rand	-
Paul Basham Associates	Tom Peters	

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1 INTRODUCTION

- 1.1 This report describes a Stage 1 Road Safety Audit carried out on proposed Highway improvement/alteration works in Fordingbridge; comprising of
 - Amendments to the Hillbury Road / Station Road junction to provide cycle facilities.
 - Improved and widened surfacing and amended / removed barriers along PROW E34/6 & BOAT E34/42.
 - Provision of a shared footway/cycleway alongside the B3078 with a connection to Ashford Road.
 - Removal of centreline and provision of advisory cycle lanes on Station Road with signage & lining. Note (drawings were not supplied for this element, however it was confirmed that the advisory cycle lanes would be approximately 1.5m in either direction with a running lane of approximately 3m remaining.

The Audit was requested by the design organisation, Paul Basham Associates, The Bothy Cams, Hall Estate, Fareham, Hampshire P016 8UTon behalf of Hampshire and Dorsett County Councils as the Overseeing Organisations.

1.2 The Road Safety Audit Team membership was as follows:

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

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

- 1.3 The audit has been 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 June 2024. The Road Safety Audit was undertaken in accordance with the Road Safety Audit brief provided by Paul Basham Associates, The Bothy Cams, Hall Estate, Fareham, Hampshire P016 8UT. The Road Safety Audit comprised an examination of the documents provided, and these are listed in Appendix A. The documents consisted of a set of the design drawings and Stage 1 Road Safety Audit Brief.

The audit team visited the site together on the 4th June 2024 between 12:30 and 14:00. Weather conditions at the time were fine, traffic flows were low and free flow speeds were moderate. There were low level pedestrian and low-level 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 No Departures from Standard was provided to the Audit Team. Personal Injury Collision (PIC) data has been provided.
- 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 B3078

3.1 General

3.1.1 PROBLEM

Location: Along the B3078.

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

A shared use cycleway footway is being proposed where kerblines could interfere with existing surface water drainage. No details of carriageway drainage have been provided for assessment; ponding on the carriageway or water moving across the carriageway at junctions or bends could lead to loss of control collisions, particularly in wet / icy conditions.

RECOMMENDATION

It is recommended that the carriageway should not pond and that drainage details should be provided at Stage 2 Safety Audit.

3.2 Local Alignment

3.2.1 PROBLEM

Location: Along the B3078.

Summary: Lack of carriageway width could lead to sideswipe collisions, or sudden braking and rear end shunts.

It appears that the B3078 carriageway width is being narrowed to accommodate the shared use cycleway/footway. However, the resultant carriageway width is between 5.5m and 5.96m. The B3078 also has bends along its route. Swept paths for heavy vehicles show no clearance and this is for vehicle widths of 2.55m which is unlikely to include wing mirrors.

This could lead to sideswipe collisions, or sudden braking and rear end shunts.

RECOMMENDATION

It is recommended that the carriageway should not be narrowed.

3.3 Junctions

3.3.1 No comments were raised in the section.

3.4 Non-Motorised User (NMU) Provision

3.4.1 **PROBLEM**

Location: Proposed crossing point.

Summary: Lack of intervisibility could lead rear end shunt collisions or collisions with pedestrians/cyclists.

Intervisibility could be restricted due to vegetation, this could lead to sudden braking at rear end shunt collisions or collisions with pedestrians/cyclists.

RECOMMENDATION

It is recommended that pedestrian and vehicle intervisibility splays should be sufficient, unobstructed and maintained.

3.5 Road Signs, Carriageway Markings and Lighting

3.5.1 No comments were raised in this section.

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4 ITEMS RAISED AT THE STAGE 1 AUDIT HILLBURY ROAD/STATION ROAD JUNCTION

4.1 General

4.1.1 PROBLEM

Location: Cycleway/footway.

Summary: Inappropriate surface material could lead to loss of control collisions.

No construction details have been submitted for assessment for the cycleway/footway. Surfacing with an insufficient PSV could lead to cyclist loss of control collisions in the event of sudden braking manoeuvres

RECOMMENDATION

It is recommended that the PSV of the cycleway surface material should be a minimum of 50PSV.

4.2 <u>Local Alignment</u>

4.2.1 No comments were raised in the section.

4.3 Junctions

4.3.1 No comments were raised in the section.

4.4 Non-Motorised User (NMU) Provision

4.4.1 **PROBLEM**

Location: The scheme.

Summary: Hillbury Road into the B3078.

Cyclists are taken off the junction and told then to dismount before continuing on their journey southwest along the B3078. The footways at this location are narrow and it is unlikely that cyclists will dismount and remount., this could lead to cyclist to pedestrian collisions.

RECOMMENDATION

It is recommended that cycle facilities should provide a continuous route, or that this item should be reviewed at Safety Audit Stages 3 and 4.

4.4.2 PROBLEM

Location: Hillbury Road junction with the B3078.

Summary: Reduced visibility could lead to sudden braking and rear end shunts or vehicle to pedestrian collisions.

A crossing point is proposed across Hillbury Road, however, intervisibility at the crossing point is restricted due to utility cabinets and vegetation – see figures 2 and 3 below. Reduced visibility could lead to sudden braking and rear end shunts or vehicle to pedestrian collisions.



Figures 3&4:Obstructions to visibility at the proposed crossing point.

RECOMMENDATION

It is recommended that pedestrian and vehicle intervisibility splays should be unobstructed and maintained.

4.5 Road Signs, Carriageway Markings and Lighting

4.5.1 No comments were raised in this section.

5 ITEMS RAISED AT THE STAGE 1 AUDIT PROW OFF STATION ROAD

5.1 General

5.1.1 PROBLEM

Location: Cycleway/footway.

Summary: Inappropriate surface material could lead to loss of control collisions.

No construction details have been submitted for assessment for the cycleway/footway. Surfacing with an insufficient PSV could lead to cyclist loss of control collisions in the event of sudden braking manoeuvres

RECOMMENDATION

It is recommended that the PSV of the cycleway surface material should be a minimum of 50PSV.

5.2 <u>Local Alignment</u>

5.2.1 No comments were raised in the section.

5.3 Junctions

5.3.1 No comments were raised in the section.

5.4 <u>Non-Motorised User (NMU) Provision</u>

5.4.1 PROBLEM

Location: Cycleway/footway.

Summary: Lack of barriers could lead to vehicle to pedestrian/cycle collisions.

The cycleway footway joins Hillbury Road at approximately 90 degrees, where cyclists or child pedestrians using the route may overshoot or run into the carriageway resulting in vehicle to pedestrian/cycle collisions.

RECOMMENDATION

It is recommended that suitable barriers should be included at detailed design stage.

5.5 Road Signs, Carriageway Markings and Lighting

5.5.1 No comments were raised in this section.

6 ITEMS RAISED AT THE STAGE 1 AUDIT STATION ROAD

6.1 General

6.1.1 **PROBLEM**

Location: Cycleway/footway.

Summary: Inappropriate carriageway and cycleway lanes could lead to collisions with cyclists, or head on or sideswipe vehicle collisions.

It is proposed to utilise the existing carriageway to provide an advisory cycle lane in each direction and the removal of the carriageway centre line. Advisory cycle lane withs of approximately 1.5m are proposed with a single running lane of approximately 3m.

Auditors are concerned that these proposals will place cyclists and motorised road users at risk of increased collisions.

Whilst it is acceptable for vehicles to enter advisory cycle lanes; if there is two-way traffic, which is likely as this is a B class road, both vehicles will have no option but to enter the cycle lanes to pass. Further, cyclists particularly child cyclists may perceive that the advisory lanes are safe to use and not expect the degree of vehicle incursion that could occur.

This could lead to collisions with cyclists, or head on or sideswipe vehicle collisions.

RECOMMENDATION

It is recommended that alternative provisions for cyclists should be investigated and installed.

6.2 Local Alignment

6.2.1 No comments were raised in the section.

6.3 Junctions

6.3.1 No comments were raised in the section.

6.4 Non-Motorised User (NMU) Provision

6.4.1 No comments were raised in this section.

6.5 Road Signs, Carriageway Markings and Lighting

6.5.1 No comments were raised in this section.

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

- 7.1 Any issues that the Audit Team wishes to bring to the attention of the Client Organisation, which is 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 does not warrant that a full review of the existing highway environment has been undertaken beyond the scope of the audit.
- 7.2 The Audit Team had no issues to raise within this section.

8 AUDITOR TEAM STATEMENT

8.1 We certify that this audit has been carried out in accordance with GG 119.

Audit Team Leader

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

Audit Team Member

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

Signed: Date: 19/06/2024

M & S Traffic Aeolus House 32 Hamelin Road Gillingham Kent ME7 3EX

+44 (0) 1634 307 498



contact@mstraffic.co.uk



www.mstraffic.co.uk

APPENDIX A

List of drawings and supporting documents

132.0001.023 – Appendix F of TAA 1	PROPOSED PEDESTRIAN AND CYCLIST INFRASTRUCTURE IMPROVEMENTS AT PRESSEYS CORNER
132.0001.048 – Appendix F of TAA 1	SWEPT PATH ANALYSIS AT PRESSEYS CORNER
132.0001.024 – Appendix G of TAA 1	PROPOSED FOOTWAY/ CYCLEWAY ALONG B3078
132.0001.047 – Appendix G of TAA 1	PROPOSED B3078 FOOTWAY/ CYCLEWAY WITH TWO-WAY 16.5M ARTICULATED VEHICLE SWEPT PATH ANALYSIS
132.0001/TAA 1	TRANSPORT ASSESSMENT ADDENDUM
132.0001/TA 2	TRANSPORT ASSESSMENT
132.0001/JR/030624	HAMPSHIRE CYCLIST ASSESSMENT
Road Safety Audit Brief May 2024	

Other Information

• Emails Paul Basham Associates.

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: B3078 Cycle Link Scheme.

Date Audit Completed: 19th June 2024

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 (DC and HCC)	Agreed RSA action
3.1.1 PROBLEM Location: Along the B3078. Summary: Ponding of surface water could lead to loss of control collisions. A shared use cycleway footway is being proposed where kerblines could interfere with existing surface water drainage. No details of carriageway drainage have been provided for assessment; ponding on the carriageway or water moving across the carriageway at junctions or bends could lead to loss of control collisions, particularly in wet / icy	It is recommended that the carriageway should not pond and that drainage details should be provided at Stage 2 Safety Audit.	Accepted – drainage details to be provided at Stage 2 RSA	Agreed	
conditions. 3.2.1 PROBLEM	It is recommended that the carriageway should not be narrowed.			

Location: Along the B3078.

Summary: Lack of carriageway width could lead to sideswipe collisions, or sudden braking and rear end shunts.

It appears that the B3078 carriageway width is being narrowed to accommodate the shared use cycleway/footway. However, the resultant carriageway width is between 5.5m and 5.96m. Th B3078 also has bends along its route. Swept paths for heavy vehicles show no clearance and this is for vehicle widths of 2.55m which is unlikely to include wing mirrors. This could lead to sideswipe collisions, or sudden braking and rear end shunts.

The part of the carriageway being narrowed is straight. The maximum amount of narrowing is 30cm, and a minimum width of 5.5m is retained, sufficient for two HGVs to pass as shown by the tracking.

HGVs traverse the rest of the route, which is often narrower and with bends, without safety issue.

The provision of cycle and pedestrian facilities removes these users from the carriageway, the safety benefits of which is considered to outweigh risk from marginal narrowing.

Detailed design will be provided at S278 stage, and opportunities to reduce the extent of narrowing can be explored and considered further in later RSA stages.

Problem 3.2.1 will be hard to overcome given the existing highway boundary and delivery of the required shared use footway/ cycleway.

HCC's Technical Guidance TG1 specifies on page 20 that carriageway width for a 'typical high movement function 50mph road' should be 7.3 metres. While it is appreciated that the Appellant is proposing a speed limit reduction, the TRO process allowing this amendment is not quaranteed. The existing width of the carriageway is already below the requirements specified in TG1 for a 60mph road and further narrowing would not be permitted by HHA if the existing speed limit remains given the safety problem raised.

Given the constraints of the network, and the safety problem raised by the Auditor, it is reasonable to explore 'the opportunities to reduce the extent of narrowing...' at this stage. The drawing appears to indicate that options to provide the footway/cycleway without narrowing, but possible realigning the carriageway could be possible, but until a design is provided it is not possible to confirm this The narrowed section not only includes the straight section, but also carriageway alignment with bends. HGV tracking analysis shows vehicle passing is extremely tight and possibly overlapping, with no gap visible between opposing tracking lines. HHA do not consider it has demonstrated that two

Fordingbridge RSA1

HGVs can pass each other safely.

Although PIA data does not record any injury accidents on this route, this does not rule out the risk of accidents in the future due to the amended carriageway alignment/ width and significantly increased traffic levels on this road as results of the proposed development.

The Safety Auditor has not confirmed the Designer's Response satisfactorily addresses the safety problem raised. Given no amendments are proposed to address the Safety Auditor's concern, a formal exception to this RSA problem will be required by HCC's Chief Engineer. Approval of this is not guaranteed and as such. the proposed works may not be deliverable.

1 Graingshage (Cort)

pedestrian and vehicle intervisibility splays should be sufficient, unobstructed and maintained.

It is recommended that

3.4.1 **PROBLEM**

Location: Proposed crossing point.

Summary: Lack of intervisibility could lead rear end shunt collisions or collisions with pedestrians/cyclists.

Intervisiblity could be restricted due to vegetation, this could lead to sudden braking at rear end shunt collisions or collisions with pedestrians/cyclists.

Accepted – visibility splays shown in submitted drawings and would be maintained.

HHA do not feel this has addressed the auditor's concern. The "x" distance used is 1.5m which is not acceptable and does not represent 'sufficient' visibility. Inclusive Mobility requires 1.75m for a wheelchair and personal assistant. The proposed visibility splays should be reviewed

Visibility splays shown in submitted drawings have not been accepted by HCC as the "x" distance used does not comply with HCC's design standards.

There is extensive vegetation along the edge of the carriageway that impacts on visibility for cycles. The submitted design shows visibility splays at the proposed crossing point, but "x" distance used is 1.5m which is not acceptable. According to HCC's TG3 Paragraph 3.6.3, Setback x-distances shall be 1.5, 2.4 & 3m

respectively for pedestrians / cyclists / equestrians. In this case the "x" distance should be 2.4m i.e visibility splays should be measured at 2.4metres away from the nearside edge of the carriageway. Without acceptable visibility splays being shown, the HHA is unsure if this problem can be addressed within the existing highway boundary as it may be that the required visibility splays cross third party land. Even if the problem is resolvable with the highway boundary, significant vegetation clearance will be required, the implications/ acceptability of which are unknow. Visibility splays should be considered based on the measured speeds. There is no guarantee that the change of TRO would be granted and even if it was, it would be uncertain that it would

effectively reduce vehicle speeds in the future. The Safety Auditor has not confirmed the Designer's Response satisfactorily addresses the safety problem raised. Given no amendments are proposed to address the Safety Auditor's concern, a formal exception to this RSA problem will be required by HCC's Chief Engineer. Approval of this is not guaranteed and as such, the proposed works may not be deliverable. 4.1.1 **PROBLEM** It is recommended that the PSV of the cycleway Agreed Location: surface material should Cycleway/footway. be a minimum of 50PSV Summary: Inappropriate surface material could lead Accepted – to be confirmed at to loss of control collisions. detailed design stage. No construction details have been submitted for assessment for the cycleway/footway. Surfacing with an insufficient PSV could lead to cyclist loss of control

collisions in the event of sudden braking manoeuvres 4.4.1 **PROBLEM** It is recommended that Agreed but must be **Location:** The scheme. cycle facilities should considered at Stage 2 provide a continuous Summary: Hillbury Road route, or that this item At Stage 3 (post into the B3078. should be reviewed at The current design intent is for construction) and 4 (if Safety Audit Stages 3 cyclists to dismount before crossing collisions within 12 Auditors were confused and 4. the carriageway. This is considered to months of scheme regarding the extent of the be the most appropriate solution shared use route as the opening), by this point within the spatial constraints. signing on the approaches the scheme has been However, the design can be to the junction is misleading constructed and works amended to incorporate shared use if and suggests that cyclists preferable. This can be considered may have been abortive. are taken off the junction further as part of Stage 3/4 RSAs. The shift from on-road on and told then to dismount. cycle lanes, to off-road, Before continuing on their Signage on approaches can be to 'Cyclists Dismount' is journey southwest along amended accordingly. the B3078. The footways at confusing, incoherent, this location are narrow and and likely to lead to it is unlikely that cyclists will conflict or be ignored dismount and remount... this could lead to cyclist to pedestrian collisions. 4.4.2 **PROBLEM** It is recommended that pedestrian and vehicle agreed **Location**: Hillbury Road intervisibility splays junction with the B3078. should be unobstructed and maintained. Accepted - visibility splays will be kept Summary: Reduced clear of any significant obstructions visibility could lead to that warrant removal. sudden braking and rear end shunts or vehicle to Crossing facilities formalise existing pedestrian collisions. desire line. A crossing point is proposed across Hillbury Road, however. intervisibility at the crossing

point is restricted due to utility cabinets and vegetation – see figures 2 and 3 below. Reduced visibility could lead to sudden braking and rear end shunts or vehicle to pedestrian collisions. 5.1.1 **PROBLEM** It is recommended that the PSV of the cycleway No design submitted so Location: surface material should Auditors cannot comment Cycleway/footway. be a minimum of on whether a suitable 50PSV. and safe scheme can be Summary: Inappropriate delivered. surface material could lead to loss of control collisions. It is recommended that a Accepted - materials to be confirmed at detailed design stage and No construction details scheme is designed such considered in Stage 2 RSA. have been submitted for that it can be audited assessment for the cycleway/footway. Surfacing with an insufficient PSV could lead to cyclist loss of control collisions in the event of sudden braking manoeuvres PROBLEM 5.4.1 It is recommended that suitable barriers should Location: be included at detailed Agreed Cycleway/footway. design stage. Summary: Lack of barriers Accepted – suitable measures to prevent overshoot to be provided at could lead to vehicle to pedestrian/cycle collisions. detailed design stage. The cycleway footway joins Hillbury Road at approximately 90 degress, where cyclists or child

pedestrians using the route may overshoot or run into				
the carriageway resulting in				
vehicle to pedestrian/cycle				
collisions.				
6.1.1 PROBLEM	It is recommended that			
	alternative provisions for		The current scheme as	
Location:	cyclists should be		designed is not accepted	
Cycleway/footway.	investigated and		as being either safe or	
	installed.		consistent with local and	
Summary: Inappropriate			national guidance	
carriageway and cycleway			Trational guidance	
lanes could lead to				
collisions with cyclists, or				
head on or sideswipe				
vehicle collisions.				
It is proposed utilize the				
It is proposed utilise the		The prepared decign intention was to		
existing carriageway to		The proposed design intention was to		
provide an advisory cycle lane in each direction and		prioritise cyclists, whilst maintaining		
the removal of the		existing carriageway width. However, an alternative scheme can be		
carriageway centre line.		provided at detailed design stage. A		
Advisory cycle lane withs of		lighter touch approach could be		
approximately 1.5m are		taken, for example, removal of the		
proposed with a single		centre line combined with cycle		
running lane of		markings to encourage cycling.		
approximately 3m.		manangs to choodrage cyoling.		
Auditors are concerned that				
these proposals will place				
cyclists and motorised road				
users at risk of increased				
collisions.				
Whilst it is acceptable for				
vehicles to enter advisory				
cycle lanes; if there is two-				
way traffic, which is likely				
as this is a B class road,				
both vehicles will have no				
option but to fully enter the				

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cycle lanes to pass.			
Further, cyclists particularly			
child cyclists may perceive			
that the advisory lanes are			
safe to use and not expect			
the degree of vehicle			
incursion that could occur.			
This could lead to collisions			
with cyclists, or head on or			
sideswipe vehicle			
collisions.			

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APPENDIX D: DESIGN ORGANISATION STATEMENT

PROJECT NAME: B3	078 Cycle Link Scheme, Road Safety Audit Stage 1	
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		
Signed		
Position		
Organisation	Paul Basham Associates Ltd	
Date		

PROJECT NAME: B3078 Cycle Link Scheme, Road Safety Audit Stage 1

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

Signed

Position

Organisation

Date