



Road Safety Audit Stage 1

Proposed Section 278 Works

North End Road

Yapton

West Sussex

Date: 5th February 2020

Report produced for: Paul Basham Associates

Report produced by: M & S Traffic

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Project Title The Steddles, Yapton

Report Title Road Safety Audit Stage 1

Revision

Status Final

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Organisation	Contact	Copies
Paul Basham Associates	Spencer Bryan	-

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1 INTRODUCTION

- 1.1 This report describes a Stage 1 Road Safety Audit carried out on proposed Section 278 works associated with a proposed development off North End Road Yapton, comprising of:

- The construction of a priority junction access off North End Road,
- The construction of a short section of footway with a crossing point.

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

- 1.2 The Audit Team membership was as follows:

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

David Chen, BSc (Hons), MSc, PhD, MCIHT, Audit Team Member

- 1.3 The audit was undertaken in accordance with 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 February 2020 and comprised an examination of the documents provided as listed in Appendix A, plus a joint visit to the site of the proposed scheme during the morning of the 3rd February 2020 between 11:30 and 12:00. Weather conditions at the time were overcast and the road surface was dry. Traffic flows were low and free flow speeds were moderate. There were low pedestrian flows and no 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 access.

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

New kerblines are being introduced, where no details of carriageway drainage or carriageway vertical profiles have been provided for assessment. North End Road appears to be super elevated on the bend or where water moving across the carriageway or ponding on the carriageway 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 PROBLEM

Location: At the proposed access.

Summary: Restricted visibility could lead to side impact or rear end shunt collisions.

Visibility splays were provided for assessment where existing vegetation could restrict visibility splays- see figures 1 & 2 overleaf. Restricted visibility could lead to could lead to side impact or rear end shunt collisions.



Figures 1&2: Existing tree and hedge line on North End Road.

RECOMMENDATION

It is recommended that the visibility splays should be free of obstruction.

3.3.2 PROBLEM

Location: Proposed access.

Summary: Insufficient carriageway space may lead to head on collisions or side swipe collisions.

Vehicle swept paths have been provided for assessment, where the refuse vehicle tracking shows incursion into the opposing carriageway of the site access and North End Road. This could cause conflict with vehicles travelling in the opposing direction leading to possible head on collisions or side swipe collisions. However, it is also recognised that this is an infrequent vehicle movement, where an inappropriately wide carriageway for the access road and junction radii would be required to accommodate the swept paths.

RECOMMENDATION

It is recommended that the junction radii should be eased to provide sufficient carriageway space for all expected movements.

3.3.3 PROBLEM

Location: North End Road junctions.

Summary: Left / right stagger could lead to side swipe collisions or rear end shunt collisions.

There is a development on the eastern side of North End Lane where Auditors were unsure if a junction was to be constructed or a simple crossover, should this be a junction this could create a 'left / right' stagger, with side road centre lines scaled at 23m apart where GG123 recommends a minimum stagger distance of 50m. Vehicles waiting to right turn into one side road could obstruct the visibility to the left out of the opposite side road such that an exiting vehicle could pull out into

the path of an unseen main road vehicle, which could lead to side impact collisions or rear end shunts

RECOMMENDATION

It is recommended that it should be clarified as to whether the eastern access is a junction and that queuing lengths should be checked to ensure that visibility plays are not adversely affected by queuing vehicles., to ensure safe operation, however, these developments appear small and traffic flows on North End Road were observed as being low.

3.4 Non-Motorised User Provision

3.4.1 PROBLEM

Location: Proposed footway.

Summary: Insufficient detail could lead to vehicle to pedestrian collisions.

North End Road has a continuous footway on the eastern side, the proposals seek to introduce a short section of footway from the development on the western side with an associated crossing point. However, no details of the drop kerbs and tactile paving at the crossing point have been provided for assessment, in addition pedestrian and vehicle intervisibility could be restricted due to the adjacent hedge line. Further the proposals show an option to continue the footway beyond the crossing point where the footway will then terminate.

Inappropriate drop kerb height or incorrect or absent tactile paving or a terminating footway could cause confusion and difficulties particularly for the mobility and visually impaired and could lead to pedestrians walking in the carriageway leading to vehicle to pedestrian collisions. In addition, restricted intervisibility between vehicles and pedestrians could compromise pedestrian safety.

RECOMMENDATIONS

It is recommended that:

- That tactile paving and dropped kerbs be provided to Department for Transport standards, and that details should be supplied at Stage 2 Safety Audit.
- That pedestrian and vehicle intervisibility plays should be unobstructed.
- That the footway should terminate at the crossing point.

3.4.2 PROBLEM

Location: Proposed footway.

Summary: Ponding on carriageway could compromise pedestrian safety.

On the eastern side of North End Road ponding was observed close to a gully which appears to be in the vicinity of the proposed crossing point- see figure 3 overleaf.

The presence of ponding could lead to pedestrians not using the crossing point and crossing at less safe places and the presence of a gully grating could lead to pedestrian trips and falls.



Figure 3: Ponding on the eastern channel on North End Road.

RECOMMENDATIONS

It is recommended that:

- That carriageway should drain and not pond at the crossing point.
- That the gully should not be within the crossing area or that a pedestrian friendly gully cover should be installed.

3.5 Road Signs, Carriageway Markings and Lighting

3.5.1 No comment.

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 in accordance with GG 119.

Audit Team Leader

Martin Morris
PGD, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency
M & S Traffic Ltd
Aeolus House
32 Hamelin Road
Gillingham
Kent ME7 3EX

Signed:



Date: 5/02/2020

Audit Team Member

David Chen
BSc (Hons), MSc, PhD, MCIHT
M & S Traffic Ltd
Aeolus House
32 Hamelin Road
Gillingham
Kent ME7 3EX
Audit Team Member

Signed:



Date:

5/02/2020

APPENDIX A

List of drawings and documentation submitted for auditing:

Drawing Number	Title
19-185-0003-P06	Proposed Site Plan.
19-185-0002-P04	Proposed Block Plan.

Supporting Documentation:

- Location Plan.

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: DESIGNERS RESPONSE

Auditors: Martin Morris (Team Leader) and David Chen (Team Member).

Scheme: Proposed S278 Works, North End Road, Yapton.

Date Audit Completed: 3rd February 2020

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.

Problem no. in safety audit report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measure (detail description)
3.1.1			
3.3.1			
3.3.2			
3.3.3			
3.4.1			
3.4.2			



The Steddles, Yapton

For Elberry Properties

Drawing title

Proposed Site Plan

Drawn		Date		Checked		Date		Scale at A1	
CP		Dec 19						1:200	
Job No.	Pro.	Org.	Zone	Level	Type	Role	No.	Rev.	
19-185	SDL	MHA	00	XX	DR	A	0003	P06	
Purpose of Issue									

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United Company
Registered in England No. 0994233



Road Safety Audit

Designer's Response

The Demolition of 'The Steddles' North End Road, Yapton and erection of 11 New Dwellings

at

The Steddles
North End Road
Yapton
BN18 0DT

Ref: 19-185
Rev P1 – February 2020



1.0 Introduction & Site Assessment

- 1.1 MH Architects Ltd (MHA) has been appointed by Elberry Properties to prepare a designer's response statement for development on the land at The Steddles, North End Road, Yapton, BN18 ODT.
- 1.2 This designer's response follows the Stage I Road Safety Audit prepared by M & S Traffic, dated 5th February, 2020

2.0 The Designer's Response

2.1 The table below sets out the Problem and Recommendation provided by M & S Traffic, together with the Designer's Response by MHA.

Item.	Problem	Recommendation	Designer's Response
3.1.1	New kerblines are being introduced, where no details of carriageway drainage or carriageway vertical profiles have been provided for assessment. North End Road appears to be super elevated on the bend or where water moving across the carriageway or ponding on the carriageway could lead to loss of control collisions	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	The new junction design for the development will be the subject of a Section 278 Agreement with WSCC. Liaison with WSCC on the detailed design will include a Stage 2 RSA, and would be expected to address any issues affecting drainage/ponding that are directly related to the proposed development
3.3.1	Visibility splays were provided for assessment where existing vegetation could restrict visibility splays- see figures 1 & 2 overleaf. Restricted visibility could lead to could lead to side impact or rear end shunt collisions.	It is recommended that the visibility splays should be free of obstruction	Visibility splays will be provided in accordance with the guidance contained in Manual for Streets. Visibility splays at the site access will be 2.4m. x 45m. in each direction along North end Road as illustrated on Dwg No. 0003 rev. P04. The visibility splays to be kept free of vegetation.
3.3.2	Vehicle swept paths have been provided for assessment, where the refuse vehicle tracking shows incursion into the opposing carriageway of the site access and North End Road. This could cause conflict with vehicles travelling in the opposing direction leading to possible head on collisions or side swipe collisions. However, it is also recognised that this is an infrequent vehicle movement, where an inappropriately wide carriageway for the access road and junction radii would be required to accommodate the swept paths	It is recommended that the junction radii should be eased to provide sufficient carriageway space for all expected movements.	Given the frequency of a large vehicle exiting the site and turning north, this is not considered to be a highway safety issue that requires amendments to the proposed junction design. Visibility can be achieved in accordance with Manual for Streets guidance and therefore any manoeuvre will be made with the driver being able to see approaching traffic.
3.3.3	There is a development on the eastern side of North End Lane where Auditors were unsure if a junction was to be constructed or a simple crossover, should this be a junction this could create a 'left / right' stagger, with side road centre lines scaled at 23m apart where GG123 recommends a minimum stagger distance of 50m. Vehicles waiting to right turn into one side road could obstruct the visibility to the left out of the opposite side road such that an exiting vehicle could pull out into the path of an unseen main road vehicle, which could lead to side impact collisions or rear end shunts	It is recommended that it should be clarified as to whether the eastern access is a junction and that queuing lengths should be checked to ensure that visibility plays are not adversely affected by queuing vehicles., to ensure safe operation, however, these developments appear small and traffic flows on North End Road were observed as being low.	Although the distance between the two access pints is 23m, this is not considered to result in a highway safety issue. It is unlikely that vehicles will travel between the two sites, and visibility form the proposed development access meets current guidance contained in Manual for Streets. The issues raised by the auditor are not uncommon and given the density of development and likely traffic movements, this is not regarded as a manoeuvre that will have a high frequency.

3.4.1	North End Road has a continuous footway on the eastern side, the proposals seek to introduce a short section of footway from the development on the western side with and associated crossing point. However, no details of the drop kerbs and tactile paving at the crossing point have been provided for assessment, in addition pedestrian and vehicle intervisibility could be restricted due to the adjacent hedge line. Further the proposals show an option to continue the footway beyond the crossing point where the footway will then terminate. Inappropriate drop kerb height or incorrect or absent tactile paving or a terminating footway could cause confusion and difficulties particularly the mobility and visually impaired and could lead to pedestrians walking in the carriageway leading to vehicle to pedestrian collisions. In addition, restricted intervisibility between vehicles and pedestrians could compromise pedestrian safety.	• That tactile paving and dropped kerbs be provided to Department for Transport standards, and that details should be supplied at Stage 2 Safety Audit. • That pedestrian and vehicle intervisibility splays should be unobstructed. • That the footway should terminate at the crossing point.	The design of the dropped crossing would be considered as part of the Section 278 Agreement and be reviewed as part of the Stage 2 RSA. The tactile paving and dropped kerb details will be constructed in accordance with the WSCC's design guidance/standard details. In regard to the pedestrian visibility splays these will be unobstructed.
3.4.2	On the eastern side of North End Road ponding was observed close to a gully which appears to be in the vicinity of the proposed crossing point- see figure 3 overleaf. The presence of ponding could lead to pedestrians not using the crossing point and crossing at less safe places and the presence of a gully grating could lead to pedestrian trips and falls	• That carriageway should drain and not pond at the crossing point. • That the gully should not be within the crossing area or that a pedestrian friendly gully cover should be installed.	Liaison with WSCC on the detailed design at the Section 278 Agreement stage will include a Stage 2 RSA, and would be expected to address any issues affecting drainage/ponding that are directly related to the proposed development.

Sandra Edwards

From: Stuart <stuart@elberry.co.uk>
Sent: 17 February 2020 11:40
To: Kerry Simmons
Cc: Janie Philp
Subject: Fwd: 'The Steddles' North End Road, Yapton

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Kerry
Please see email below
Thx
Stu

Sent from my iPhone

Begin forwarded message:

From: Stephen Gee <Stephen.Gee@westsussex.gov.uk>
Date: 17 February 2020 at 09:33:13 CET
To: Spencer Bryan <spencer@paulbashamassociates.com>
Cc: Stuart Mackley <stuart@elberry.co.uk>, "Chris Purdy (MHA)" <cjp@mharchitects.co.uk>
Subject: RE: 'The Steddles' North End Road, Yapton

Spencer,
Having discussed with the WSCC safety auditor I can confirm I'm happy with the contents of the designers response.

Stephen

From: Spencer Bryan [mailto:spencer@paulbashamassociates.com]
Sent: 10 February 2020 19:16
To: Stephen Gee
Cc: Stuart Mackley; Chris Purdy (MHA)
Subject: 'The Steddles' North End Road, Yapton

Stephen, further to our discussions last week I wanted to share with you the problems identified through the Stage 1 RSA, which I have attached. I have also enclosed the designers response outlining the proposals to address the issues raised by the auditor. Many of these would be addressed through the detailed design stage at the point the access is submitted for technical approval at the Section 278 Agreement stage, at which point a Stage 2 RSA would be undertaken.

Before submitting this to Arun DC, I would be grateful if you could review and let me have your initial thoughts on the designers response. If you have any questions in the meantime please give me a call, thanks.

Kind Regards

Spencer Bryan
Associate Director
Transport Planning

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