

# **A795 Ambridge Bypass Safety Scheme Stage 2 Road Safety Audit**



## Document Control

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1	Final	M. Juan	21.06.21	Hugh Turner	21.06.21	M. Juan	21.06.21

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# 1. Project Details

## 1.1 Project Details

<b>Report Title:</b>	A795 Ambridge Bypass Safety Scheme Stage 2 Road Safety Audit
<b>Date:</b>	21 June 2021
<b>Document Reference &amp; Revision:</b>	AMB-RSA-S2/06/21 Rev. – 1.0
<b>Prepared By:</b>	Michael Juan
<b>On Behalf of:</b>	Overseeing Organisation

## 2. Introduction

### 2.1 Background

2.1.1 This report results from a Stage 2 Road Safety Audit carried out on the A795 Ambridge Bypass Safety Scheme. The Road Safety Audit has been undertaken at the request of Elaine Gain, the Overseeing Organisation Project Manager. The audit was carried out during June 2021.

2.1.2 The Road Safety Audit Team membership approved by Elaine Gain, the Overseeing Organisation Project Manager was as follows:

Michael Juan *	Principal Highway Engineer Ewings & Barnes Partnership, Audit Team Leader
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Hugh Turner *	Senior Engineer Ewings & Barnes Partnership, Audit Team Member
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Audit Team members marked with an asterisk above hold a Highways England Approved Certificate of Competency (CoC) in Road Safety Audit, in accordance with Article (1–3) of EC Directive 2008/96/EC.

2.1.3 The audit took place at the Erinsborough office of Ewings & Barnes Partnership on 14 June 2021. The Road Safety Audit was undertaken in accordance with the Road Safety Audit Brief provided and approved by Elaine Gain, the Overseeing Organisation Project Manager. The audit comprised an examination of the documents provided in the Brief as detailed in Appendix A.

2.1.4 The Audit Team visited the site together during the afternoon of 15 June 2021 between 12:45 and 15:50. During this site visit the weather was mixed cloudy and sunny but dry giving a dry road surface. At the time of the site visit traffic was light and free flowing with some pedestrian and cyclist's movement observed on the Ambridge Distributor Road.

2.1.5 The terms of reference of the audit are as described in GG 119 Rev.2. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits.

2.1.6 The scheme is to introduce safety improvements and involves the installation of additional traffic signs, amendment to road markings and VRS improvements along the recently constructed Bypass.

2.1.7 The Audit Team have not been informed of any Departures from Standard for the scheme.

- 2.1.8 The scheme has been examined and this report compiled only regarding the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other Standards or criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.
- 2.1.9 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG 119, and in no way, imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

## 3. Items Raised At The Stage 1 Audit

### 3.1 General

3.1.1 There were five issues raised in the Stage 1 Road Safety Audit report, dated 30 September 2020, one of which has not been addresses and the others have been resolved. These were subject to a Response Report dated 18 November 2020.

### 3.2 Previously Raised Problem

#### 3.2.1 PROBLEM 1

Location A: A795 Stowford Junction – Southbound Approach

Summary: Insufficiently specified vegetation clearance, increasing the risk of injury with loss of control type collisions.

The location of the southbound off slip is located on a gradual left-hand bend and is obscured by the current vegetation after the Advance Directional Sign. This vegetation, which is not in leaf, is also partially obscuring the countdown markers on the approach for this junction and could also obscure the visibility of the proposed Direction Sign. The vegetation clearance shown in the supplied drawing gives no dimension other than area. This may lead to insufficient vegetation being removed and compromise the forward visibility of the road layout being achieved and road users being unable to appreciate the approaching off slip. This could result in loss of control type collisions, risking injury to vehicle occupants.

#### RECOMMENDATION

It is recommended that extents of vegetation are sufficiently detailed so that the intended vegetation clearance is achieved along the southbound approach, making an allowance for seasonal growth.

#### DESIGN TEAM RESPONSE

Agree – The extents of vegetation clearance will be reviewed to ensure they provide forward visibility in accordance with standards with an allowance for future growth to be confirmed prior to works and agreed with the highway ecologists.

Comment at this Stage 2 Road Safety Audit

Although this was agreed by the Design Team, the latest drawings did not fully resolve the issue, therefore the problem is raised again at this stage, as shown at Para 4.1.1 PROBLEM 1.

## 4. Items Raised At This Stage 2 Audit

### 4.1 General

#### 4.1.1 PROBLEM 1

Location A: A795 Stowford Junction – Southbound Approach

Summary: Insufficiently specified vegetation clearance, increasing the risk of injury with loss of control type collisions.

The location of the southbound off slip is located on a gradual left-hand bend and is obscured by the current vegetation after the Advance Directional Sign. This vegetation, which is not in leaf, is also partially obscuring the countdown markers on the approach for this junction and could also obscure the visibility of the proposed Direction Sign. The vegetation clearance shown in the supplied drawing gives no dimension other than area. This may lead to insufficient vegetation being removed and compromise the forward visibility of the road layout being achieved and road users being unable to appreciate the approaching off slip. This could result in loss of control type collisions, risking injury to vehicle occupants.



### RECOMMENDATION

It is recommended that extents of vegetation are sufficiently detailed so that the intended vegetation clearance is achieved along the southbound approach, making an allowance for seasonal growth.

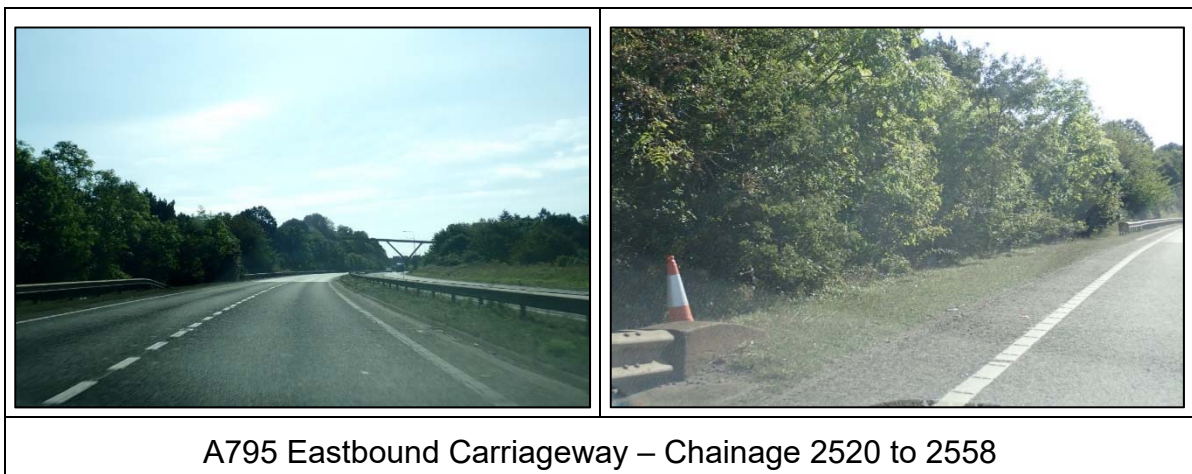


## 4.1.2 PROBLEM 2

Location B: A795 Southbound Carriageway – Chainage 2520 to 2558

Summary: Existing vegetation within working width of proposed Vehicle Restraint System (VRS), increasing risk of injury if errant vehicle left carriageway.

It is proposed to close the gap in the existing VRS along the southbound carriageway towards the Stowford Junction. At present there is vegetation/trees in this location and appears to be within the working width of the proposed VRS, with no indication that this vegetation is to be removed. Any vegetation/trees that is within the working width of the proposed VRS could impede the operation if struck by an errant vehicle, increasing the risk and severity of injury to vehicle occupants.



## RECOMMENDATION

It is recommended that all vegetation/trees within the working width of the proposed VRS are removed, with an allowance for seasonal growth.

## 4.2 Local Alignment

4.2.1 No specific road safety issues have been identified at this stage.



## 4.3 Junctions

### 4.3.1 PROBLEM 3

Location C: Splitter island on A795 southbound approach to roundabout

Summary: Screen length enables early roundabout entry decisions and could result in vehicle conflicts.

The proposed exact location of the sight screen is not specified in the supplied drawings but appears to approximately coincide with the existing chevron signs. Partial visibility currently exists between A795 southbound traffic and traffic on the circulatory carriageway to the right of the existing chevrons. On site, some road users were observed to make an early decision to enter the roundabout, accelerating as they approached the existing chevrons, whilst other road users slowed prior to the give way line. However, some visibility of circulatory traffic is possible between the existing chevrons, allowing late braking. Similar visibility of the circulatory carriageway is expected to the right of the proposed sight screen, but the proposed sight screen will remove visibility to the right from adjacent vehicles. This may lead to shunt-type collisions between accelerating and braking vehicles on the southbound approach and vehicle conflicts at the southbound roundabout entry. This risks injury to vehicle occupants.

	
View of circulatory carriageway from A795 southbound lane 2	View of circulatory traffic from A795 southbound approach through existing chevrons

## RECOMMENDATION

It is recommended that the sight screen is extended as far north as practicable to minimise visibility between A795 southbound traffic and traffic on the circulatory carriageway.

## 4.4 Non-Motorised User Provision

### 4.4.1 PROBLEM 4

Location D: Ambridge Distributor Road Eastbound & Westbound Approach -  
30mph Terminal Sign TS03 & TS16

Summary: Mounting height of sign adjacent to footpath may be struck by cyclists.

The location of the combined traffic sign TS03 & TS08 is in the grass verge, on the eastbound approach and adjacent to a footpath and is shown to have a mounting height of 1800mm. The location of the combined traffic sign TS16 & TS17 is in the grass verge, on the westbound approach and adjacent to a footpath and the existing sign is known to have a mounting height of 1900mm. Although this footpath is not designated for shared use (cyclists & pedestrians), it is known and been observed on previous site visits in this area that cyclists do regularly utilise this footpath when travelling to and from Ambridge along the Ambridge Distributor Road. The lower part of the sign could be struck by cyclists when travelling past this sign, increasing the risk of injury. This could be more of a concern with the removal of street lighting on the approach to the sign in combination with cycling along this section during the darker mornings & evenings.



### RECOMMENDATION

It is recommended that the mounting height of this sign combination is at an appropriate height for all vulnerable road users.

## 4.5 Road Signs, Carriageway Markings, and Lighting

### 4.5.1 PROBLEM 5

Location E: A795 Stowford Junction – Splitter Island

Summary: Removal of Direction Sign from Splitter Island may lead to late braking and loss of control collisions.

It is proposed to relocate the Direction Sign from its current location on the splitter island to the commencement of the off slip for the junction within the nearside verge. The proposed marker posts for the splitter island may not clearly identify the junction for approaching motorists. During the site visit it was clear that motorists have been involved in loss of control type collisions and have demolished the direction sign and all the chevron signs on the splitter island.



### RECOMMENDATION

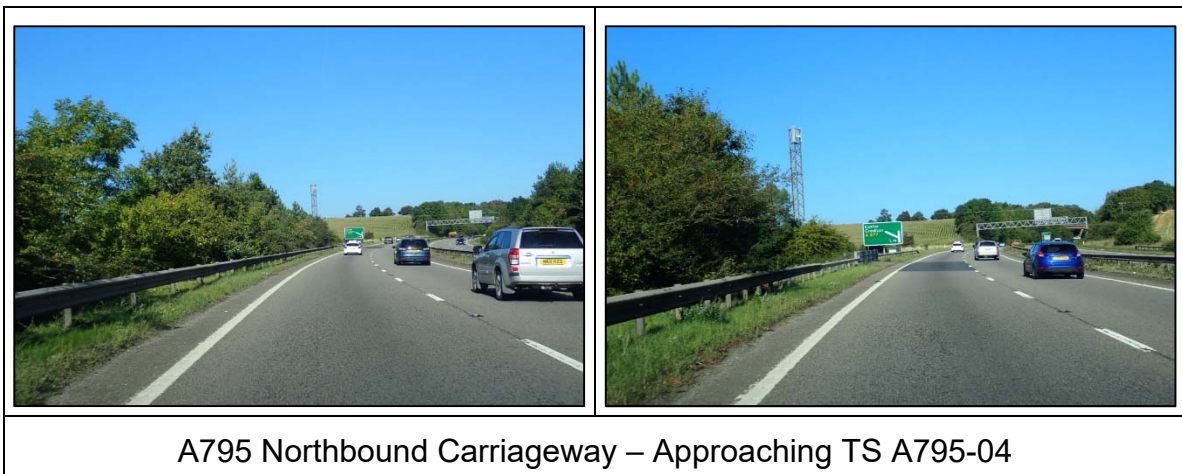
It is recommended that the splitter island for approaching motorist is clearly identifiable, for example by replacing the existing chevrons signs on the splitter island with a more durable set and extending further along the island towards the nosing.

#### 4.5.2 PROBLEM 6

Location F: A795 Northbound Carriageway – TS A795-04

Summary: Proposed location of Advance Direction Sign (ADS) may not be protected by existing VRS, increasing risk of injury if errant vehicle left carriageway.

It is proposed to replace the existing ADS (TS A795-04) to a new location 5m in a northerly direction. The ADS is protected by the current VRS with an existing 8 metres of full height barrier after the sign assembly. The proposed location of the new ADS will place the new sign 5m north and in doing so, will only leave approximately 3m of full height barrier after this proposed assembly. The new location of the ADS in conjunction with the existing VRS may result in the VRS not performing as designed and increase the severity of injury to vehicle occupants if an errant vehicle left the carriageway at this location.



#### RECOMMENDATION

It is recommended that the proposed new sign assembly is adequately protected by the existing VRS.



## 5. Audit Team Statement

We certify that this Road Safety Audit has been carried out in accordance with GG 119 Rev.2.

### AUDIT TEAM LEADER

Michael Juan  
Principal Highway Engineer  
Ewings & Barnes Partnership  
Traffic & Collision Investigation Division  
Albert Square  
Erinsborough  
Rutland

Signed: 

Date: 21 June 2021

### AUDIT TEAM MEMBER

Hugh Turner  
Senior Engineer  
Ewings & Barnes Partnership  
Traffic & Collision Investigation Division  
Albert Square  
Erinsborough  
Rutland

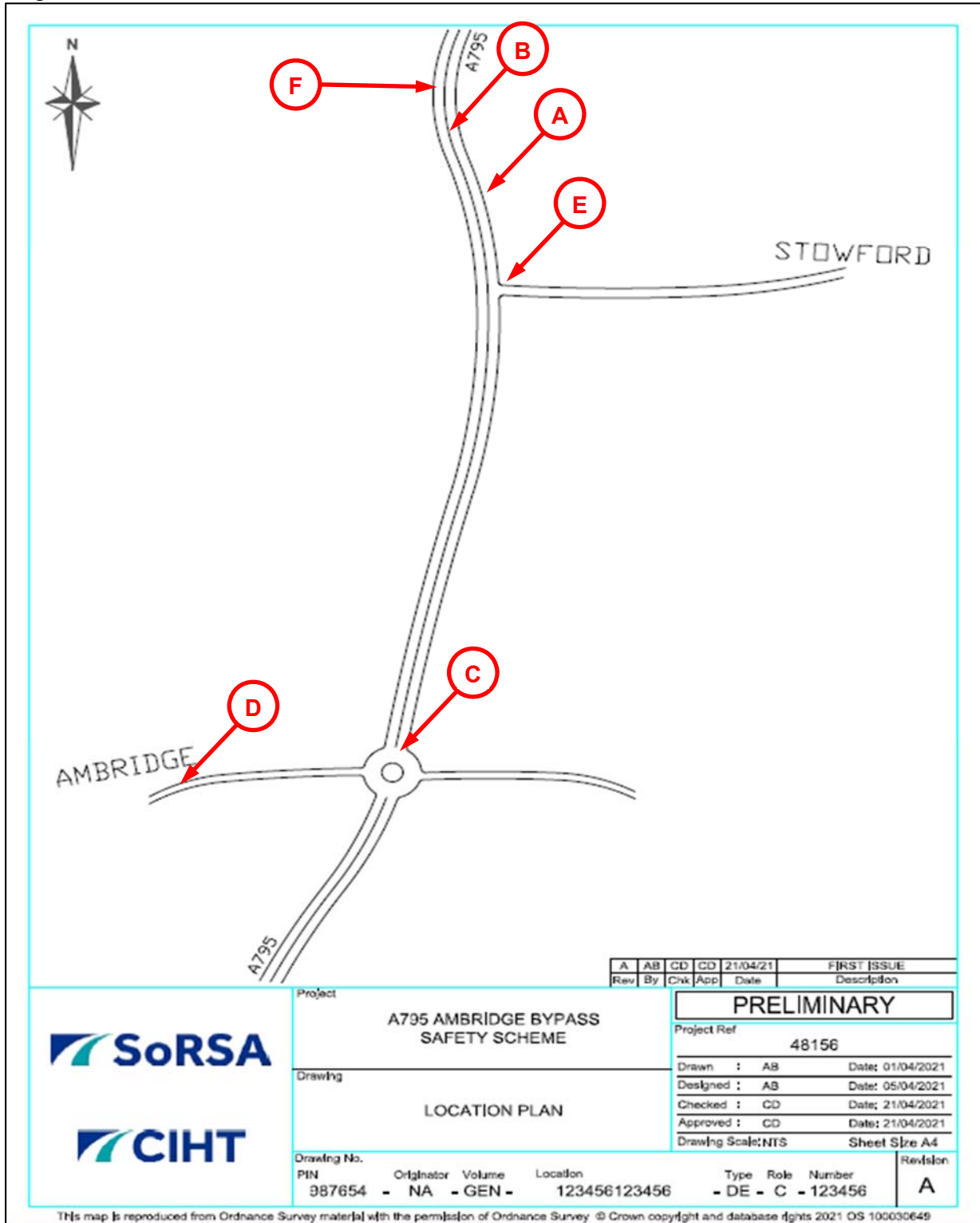
Signed: 

Date: 21 June 2021

## 6. Figures

### 6.1 Location Plan

Figure 1



A795 Ambridge Bypass

## 7. Appendices

### 7.1 Appendix A: List of Documents/Plans supplied by Design Organisation

Stage 2 Road Safety Audit Brief – Dated 07 June 2021

Design Organisation - Highway Drawings:

987654-NA-Gen-123456123456-DE-C-123456	Rev. A	Location Plan
987654-NA-Gen-123456123456-DE-C-100-01	Rev. D	General Arrangement
987654-NA-Gen-123456123456-DE-C-200-01	Rev. C	Site Clearance
987654-NA-Gen-123456123456-DE-C-400-01	Rev. B	Vehicle Restraint 1 of 2
987654-NA-Gen-123456123456-DE-C-400-02	Rev. C	Vehicle Restraint 2 of 2
987654-NA-Gen-123456123456-DE-C-500-01	Rev. B	Drainage 1 of 2
987654-NA-Gen-123456123456-DE-C-500-02	Rev. D	Drainage 2 of 2
987654-NA-Gen-123456123456-DE-C-700-01	Rev. B	Pavement 1 of 2
987654-NA-Gen-123456123456-DE-C-700-02	Rev. C	Pavement 2 of 2
987654-NA-Gen-123456123456-DE-C-1100-01	Rev. B	Kerb Detail 1 of 2
987654-NA-Gen-123456123456-DE-C-1100-02	Rev. C	Kerb Detail 2 of 2
987654-NA-Gen-123456123456-DE-C-1200-01	Rev. C	Traffic Signs 1 of 6
987654-NA-Gen-123456123456-DE-C-1200-02	Rev. D	Traffic Signs 2 of 6
987654-NA-Gen-123456123456-DE-C-1200-03	Rev. C	Traffic Signs 3 of 6
987654-NA-Gen-123456123456-DE-C-1200-04	Rev. B	Traffic Signs 4 of 6
987654-NA-Gen-123456123456-DE-C-1200-05	Rev. C	Traffic Signs 5 of 6
987654-NA-Gen-123456123456-DE-C-1200-06	Rev. B	Traffic Signs 6 of 6

### 7.2 Appendix B: Other Information considered by RSA Team

Stage 1 Road Safety Audit Report (AMB-RSA-S1/09/20) – Dated 30 September 2020

Stage 1 Response Report (AMB-RSA-S1-DS/11/20) – Dated 18 November 2020

Collision Data 2017 to June 2020 (AMB-CR/06/21) – Dated 01 June 2021

Walking Cycling & Horse Riding Assessment (AMB-WCHAR-08/20) – 12 August 2020