

# **THE SILK ROAD, BOLLINGTON**

## **PROPOSED PEDESTRIAN CROSSING**

### **Road Safety Audit Stage 1**

**January 2017**



## Document Control Sheet

Client: Cheshire East Council

Project No:  
C1605WALK04

Project: The Silk Road, Macclesfield  
Document Title: Road Safety Audit Stage 1  
Ref. No: CEH/RSA/16-17/16

	Originated by	Checked by	Reviewed by	Approved by
<b>ORIGINAL</b>	NAME	NAME	NAME	NAME
<b>Revision 0</b>				
DATE	INITIALS <b>DEP</b>	INITIALS <b>DC</b>	INITIALS <b>SPB</b>	INITIALS <b>GM</b>
	<b>Document Status</b>			

<b>REVISION</b>	NAME	NAME	NAME	NAME
DATE	INITIALS	INITIALS	INITIALS	INITIALS
	<b>Document Status</b>			

<b>REVISION</b>	NAME	NAME	NAME	NAME
DATE	INITIALS	INITIALS	INITIALS	INITIALS
	<b>Document Status</b>			

<b>REVISION</b>	NAME	NAME	NAME	NAME
DATE	INITIALS	INITIALS	INITIALS	INITIALS
	<b>Document Status</b>			

### Ringway Jacobs

This document has been prepared by Ringway Jacobs in its professional capacity in accordance with the terms and conditions of Ringway Jacobs' contract with Cheshire East Council (the "Client"). Regard should be had to those terms and conditions when considering and/or placing any reliance on this document. No part of this document may be copied or reproduced by any means without prior written permission from Ringway Jacobs. If you have received this document in error, please destroy all copies in your possession or control and notify Ringway Jacobs.

Any advice, opinions, or recommendations within this document (a) should be read and relied upon only in the context of the document as a whole; (b) do not, in any way, purport to include any manner of legal advice or opinion; (c) are based upon the information made available to Ringway Jacobs at the date of this document and on current UK standards, codes, technology and construction practices as at the date of this document. It should be noted and it is expressly stated that no independent verification of any of the documents or information supplied to Ringway Jacobs has been made. No liability is accepted by Ringway Jacobs for any use of this document, other than for the purposes for which it was originally prepared and provided. Following final delivery of this document to the Client, Ringway Jacobs will have no further obligations or duty to advise the Client on any matters, including development affecting the information or advice provided in this document.

This document has been prepared for the exclusive use of the Client and unless otherwise agreed in writing by Ringway Jacobs, no other party may use, make use of or rely on the contents of this document. Should the Client wish to release this document to a third party, Ringway Jacobs may, at its discretion, agree to such release provided that (a) Ringway Jacobs' written agreement is obtained prior to such release; and (b) by release of the document to the third party, that third party does not acquire any rights, contractual or otherwise, whatsoever against Ringway Jacobs and Ringway Jacobs, accordingly, assume no duties, liabilities or obligations to that third party; and (c) Ringway Jacobs accepts no responsibility for any loss or damage incurred by the Client or for any conflict of Ringway Jacobs' interests arising out of the Client's release of this document to the third party.

## Contents

<b>1</b>	<b>Introduction</b>	<b>2</b>
<b>1.1</b>	<b>Background</b>	<b>2</b>
<b>1.2</b>	<b>Scheme Details</b>	<b>2</b>
<b>1.3</b>	<b>Safety Assessment Team</b>	<b>2</b>
<b>1.5</b>	<b>Collision History</b>	<b>2</b>
<b>1.6</b>	<b>Traffic Data</b>	<b>3</b>
<b>2</b>	<b>Items Raised at this Stage 1 Road Safety Audit</b>	<b>4</b>
<b>2.1</b>	<b>Summary Table</b>	<b>4</b>
<b>2.2</b>	<b>PROBLEM A1.1</b>	<b>5</b>
<b>2.3</b>	<b>PROBLEM A1.2</b>	<b>6</b>
<b>2.4</b>	<b>PROBLEM A1.3</b>	<b>7</b>
<b>2.5</b>	<b>PROBLEM A1.4</b>	<b>8</b>
<b>2.6</b>	<b>PROBLEM A2.1</b>	<b>9</b>
<b>2.7</b>	<b>PROBLEM A4.1</b>	<b>10</b>
<b>3</b>	<b>Audit Team Statement</b>	<b>11</b>
<b>4</b>	<b>Road Safety Exception Report</b>	<b>9</b>
<b>4</b>	<b>Appendix A – Plan of Items Raised by this Audit</b>	<b>132</b>



## 1 Introduction

### 1.1 Background

This report results from a request from Cheshire East Highways on behalf of Cheshire East Council for a for a Stage 1 Road Safety Audit (RSA). This RSA is concerned only with the proposed pedestrian crossing at the roundabout of the A523 The Silk Road and the B5090 Bollington Road.

### 1.2 Scheme Details

The audited scheme includes the provision of a 'TOUCAN' type crossing on the A523 to the South of the roundabout, as well as the wider safety considerations surrounding the installation of such a crossing at this location.

For a plan view of the site, see Appendix A.

### 1.3 Safety Assessment Team

The Audit Team	Road Safety Engineer, Traffic and Road Safety Team, Cheshire East Highways Senior Road Safety Engineer, Design, Cheshire East Highways
Audit Observers	Graduate Engineer Senior Technician
Documents Used:	
Departures from standards	No departures from standard have been advised
Audit desktop evaluation	Location: Cheshire East Highways Office, Delamere House Date: 9 <sup>th</sup> January 2017
Site visit daytime	Site visited by: The Audit Team Weather: Broken cloud, mild. Road surface was damp Date: 10 <sup>th</sup> January 2017
Site visit night-time	N/A

Where recommendations are made these do not comprise design decisions, and it remains the responsibility of the design team to incorporate any changes into the scheme, and consider any interactions between design elements.

### 1.5 Collision History

Collision data for the five year period from June 2011 until May 2016 was obtained for the purposes of this report. This indicates that there have been



eleven Road Traffic Collisions (RTC's) reported by the police within the immediate vicinity of the roundabout within the last five years. The descriptions of the collisions have been removed from the majority of the accidents, but observing the locations that the collisions occurred, it would appear that the majority would be typical roundabout accidents, with rear end shunts and side impact. The vast majority of the collisions occurred on the southbound approach to the roundabout.

#### **1.6 Traffic Data**

No traffic data was available

## 2 Items Raised at this Stage 1 Road Safety Audit

### 2.1 Summary Table

The table summarises the findings from this Stage 1 Road Safety Audit, which are described in detail below. The reference numbers in the table below are based on the Stage 1 annex checklists in HD19/15.

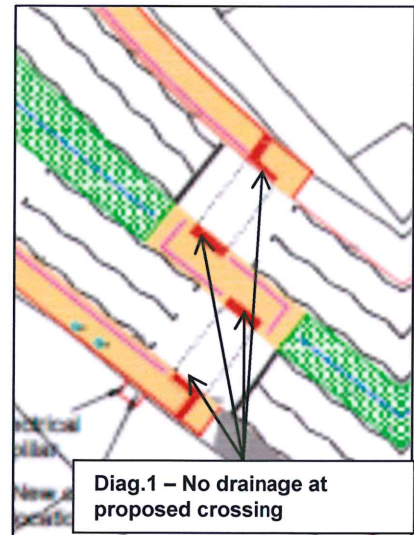
<b>Summary of Items Raised at this Stage 1 Road Safety Audit.</b>		
Item	Problem / No Problem	Notes
<b>A1 General</b>		
Departures from Standard	No Problem	
Cross Sections	No Problem	
Cross Sectional Variation	No Problem	
Drainage	Problem	Lack of drainage
Landscaping	Problem	Vegetation
Public Utilities	No Problem	
Lay-by's	Problem	Service vehicle layby
Access	No Problem	
Emergency Vehicles	No Problem	
Future Widening	No Problem	
Adjacent Development and Roads	No Problem	
Basic Design Principles	Problem	Vehicle speeds
<b>A2 Local Alignment</b>		
Visibility	Problem	Visibility from Old Bollington Road approach
New / Existing Road Interface	No Problem	
Vertical Alignment	No Problem	
<b>A3 Junctions</b>		
Layout	No Problem	
Visibility	No Problem	
<b>A4 Non Motorised Users</b>		
Adjacent Land	No Problem	
Pedestrians/Cyclists	No Problem	Lighting column
Equestrians	No Problem	
<b>A5 Road Signs &amp; Marking</b>		
Signs	No Problem	
Lighting	No Problem	
Poles/Columns	No Problem	
Road Markings	No Problem	

## 2.2 PROBLEM A1.1

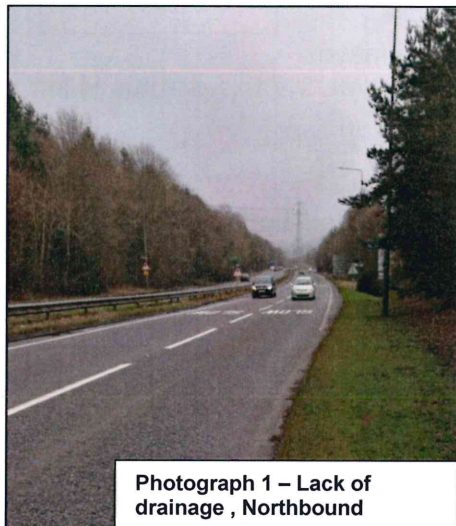
**Location:** A523, The Silk Road

**Summary:** Lack of drainage at crossing points.

**Description:** The proposed crossing points will lie inbetween existing gully locations. The Audit team feel that this may not remove all standing water from immediately in front of the proposed dropped crossing. Any standing water could lead to a slipping hazard for Non Motorised users (NMU's), particularly during cold weather where ice may form and significantly increase the risk of falling.



Diag.1 – No drainage at proposed crossing



Photograph 1 – Lack of drainage , Northbound

**Recommendation:** It is recommended that drainage is provided to prevent any standing water from gathering in front of the proposed crossing facility.

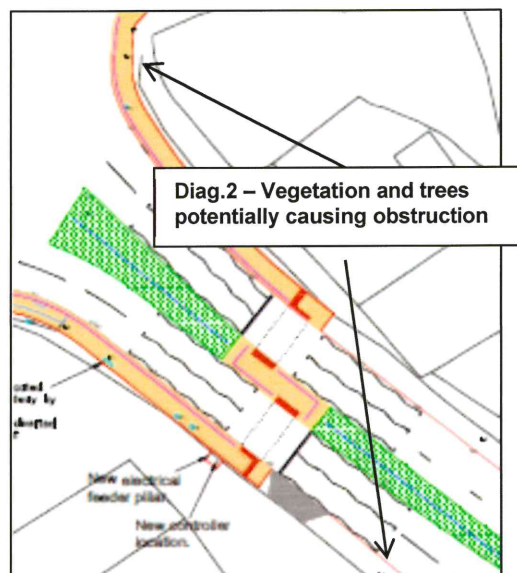


### 2.3 PROBLEM A1.2

**Location:** A523, The Silk Road

**Summary:** Existing tree line and vegetation may obstruct visibility and fallen leaves may create a slipping hazard..

**Description:** The existing tree line South of the roundabout on the Northbound approach to the roundabout, and the trees and vegetation at the Old Bollington Road approach to the roundabout could obstruct visibility for NMU's, particularly during the summer months when in full leaf. During the autumn and winter months, fallen leaves may present a slipping hazard for NMU's if this detritus is left, particularly during wet weather conditions.



**Recommendation:** It is recommended that maximum visibility is provided for NMU's through regular maintenance of the vegetation and road sweeping.



Photograph 2 – View North towards Old Bollington Road approach

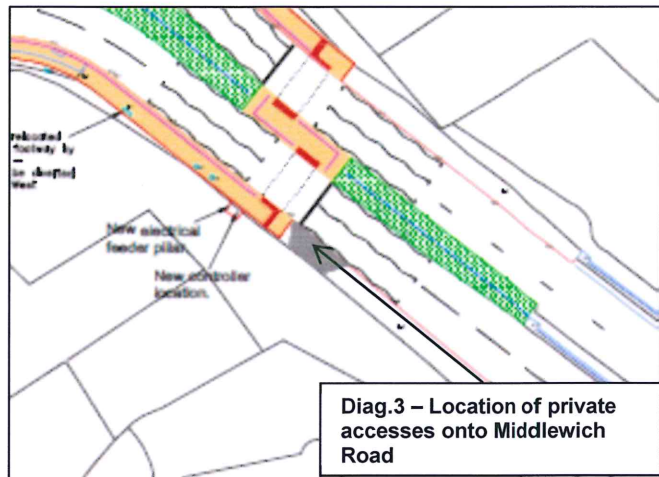
## 2.4 PROBLEM A1.3

**Location:** A523, The Silk Road

**Summary:** Location of Service vehicle layby.

**Description:** The proposed location of the service vehicle layby could obstruct visibility for NMU's (viewing oncoming vehicles) and drivers travelling Northbound approaching the crossing (viewing pedestrians at the proposed crossing). This could lead to conflict between NMU's and vehicles leading to serious/fatal injuries.

**Recommendation:** It is recommended that the service vehicle layby is relocated to prevent obstructing the view of NMU's and pedestrians.

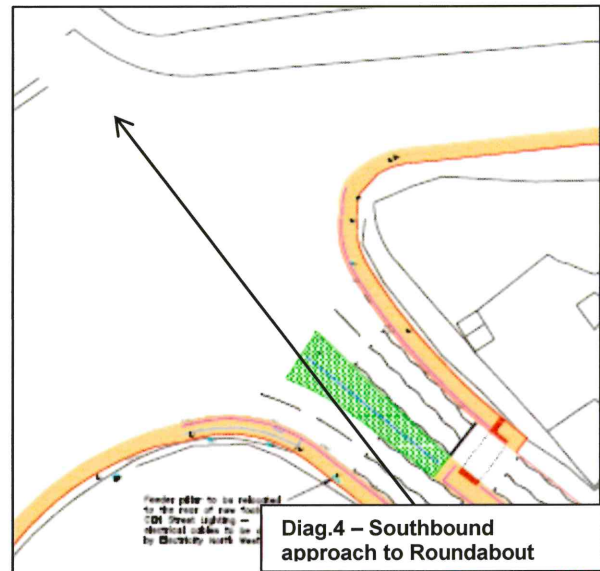


## 2.5 PROBLEM A1.4

**Location:** A523, The Silk Road, Southbound approach.

**Summary:** Vehicle speeds exiting the roundabout.

**Description:** During the site visit, the Audit Team observed numerous incidents where drivers exiting the roundabout, travelling Southbound on The Silk Road, were accelerating aggressively and very quickly reaching high speeds. Given the single carriageway approach from the North to the roundabout, and the dual carriageway exit, along with the long straight carriageway upon leaving the junction, this behaviour could potentially lead to serious incidents with vehicles and NMU's, vehicle loss of control and rear end shunts.



**Recommendation:** It is recommended that methods are implemented to reduce the speed of vehicles exiting the roundabout travelling southbound.

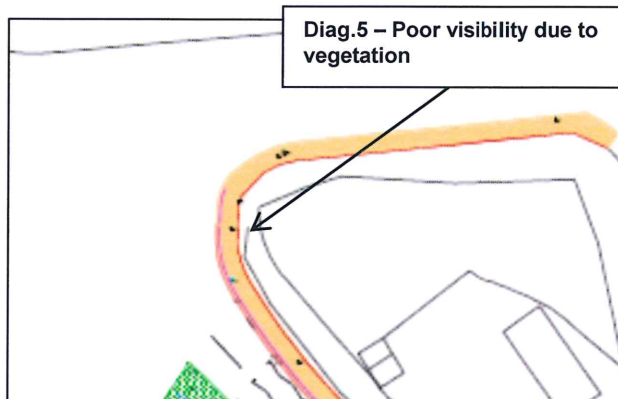


## 2.6 PROBLEM A2.1

**Location:** Old Bollington Road

**Summary:** Existing tree line and vegetation may obstruct visibility.

**Description:** The existing tree line and vegetation on the approach to the roundabout from Old Bollington Road will obstruct visibility of the proposed crossing point for drivers wishing to continue onto The Silk Road. This could lead to potential sharp braking manoeuvres, stop line overrunning, loss of control, rear end shunts and conflict with NMU's at the proposed crossing point.



**Recommendation:** It is recommended that maximum visibility is provided for drivers on Old Bollington Road approaching the proposed signalised crossing point on The Silk Road. Advanced warning is also recommended.

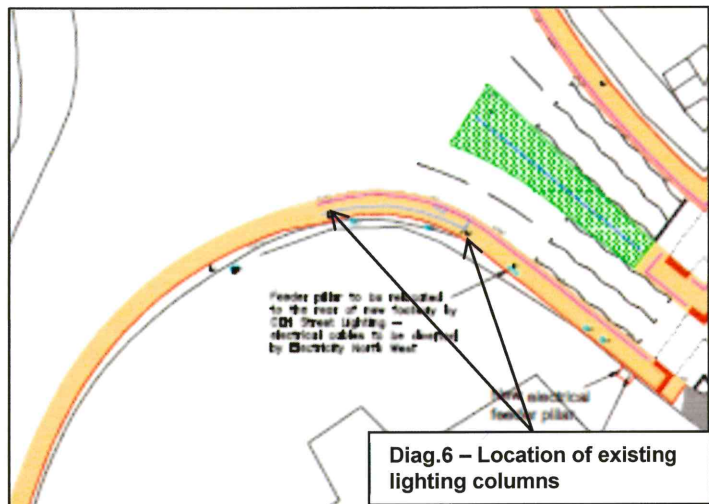
Photograph 5 – View North  
towards Old Bollington Road

## 2.7 PROBLEM A4.1

**Location:** Footway  
south west side of A523  
The Silk Road

**Summary:** Lighting  
columns in proposed  
footway.

**Description:** The design proposal shows that two existing lighting columns will retain their existing position within the middle of the proposed footway. This could lead to potential conflict for NMU's, particularly if opposing flows of NMU traffic meet at these locations, leading to tripping and falling hazards.



**Recommendation:** It is recommended that footway space is maximised for NMU's to prevent narrowing and potential conflict.



### 3 Audit Team Statement

I certify that this report complies with HD19/15, except where stated in the text.

AUDIT TEAM LEADER

Road Safety Engineer  
Cheshire East Highways

Date 16<sup>th</sup> January 2017

AUDIT TEAM MEMBER

Senior Road Safety Engineer, Design  
Cheshire East Highways



## 4 Road Safety Exception Report

### ROAD SAFETY AUDIT DESIGNER'S RESPONSE / EXCEPTION REPORT

<b>Stage:</b>		<b>1</b>	<b>Road Safety Audit reference number:</b>	<b>CEH/RSA/16-17/16</b>
<b>Scheme name:</b>		A523 The Silk Road, Bollington		
<b>Location (if different from above):</b>				
<b>Scheme reference:</b>		C1605WALK04		

The issues categorised in the road safety audit as '**Problem**' matters are those causing serious concern and are summarised below. The purpose of this form is for the scheme Overseeing Organisation to respond to the '**Problem**' matters in accordance with the procedure set out in HD 19/15. Issues within the covering letter listed as '**Additional considerations**' are included as points that the Audit Team consider should also be addressed by the Design Engineer.

Responses should be sent to, 6<sup>th</sup> Floor Delamere House, Delamere Street, Crewe, Cheshire, CW1 2LL.

Problem number	Problem Accepted Yes/No	Recommendation Accepted Yes/No	Design Engineer's comments	Scheme promoter's decision and proposed action
A1.1	Y	Y	Channel gradients to be checked. Positive drainage installed where required	
A1.2	Y	Y	Vegetation to be cut back when crossing installed. To be fed in to the Asset Management system	

A1.3	N	N	The reason for the bay location is so that a parked maintenance vehicle does not obstruct the footway. It needs to be on the same side of the road as the controller as this is what the engineer most frequently needs access to. The bay is wide enough so that a parked vehicle should not obstruct the signal head or a waiting ped. Expected usage is very low, it is only likely to be used twice a year for the inspection (one hour each time) and when there is a fault.	<i>Additional</i>
A1.4	Y	Y	Installation of Speed Assessment loops on high speed approaches. Installation of VAS warning signs on approaches. Increase inter green timings of the crossing over the exit from the roundabout	Additional lane markings to be provided on circulatory carriageway.
A2.1	Y	Y	Vegetation to be cut back on installation. Warning signs to be installed on side road approaches/	
A4.1	Y	Y	Lighting columns to be relocated to provide maximum pedestrian / cycle space	
Additional considerations raised in letter (outside scope of RSA)				
Design Engineer's comments				Scheme promoter's decision and proposed action
Auditors			Design Engineer	Scheme Promoter
The Audit Team			<i>R. Cuthbert</i>	<i>[Signature]</i>
Date			Date	Date
16 <sup>th</sup> January 2017			31/1/17	6.3.17

Signed		Signed	
			



## 4 Appendix A – Plan of Items Raised by this Audit



