

Road Safety Audit Stage F

Western Way, Andover

June 2024

Document reference: 04/278

Client reference: R.J509237.01

Road User Audit Team
Hampshire County Council
The Castle
Winchester SO23 8UD

roaduseraudit@hants.gov.uk

www.hants.gov.uk/engineeringservices

1 Introduction

- 1.1 This report results from a feasibility Stage Road Safety Audit carried out on a proposed scheme to transform a large gyratory on Western Avenue in Andover into a green space that is accessible to the public. To accommodate this, the eastern side of the gyratory will be closed to traffic and changes will be made to West Street and Waterloo Court. It is also proposed to provide active travel improvements between Folly roundabout and Bridge Street.
- 1.2 The Road Safety Audit Team membership was as follows: -
- | | |
|--------------------|---|
| Audit Team Leader: | Steve Willoughby MCIHT MSoRSA
Hampshire Engineering Services |
| Audit Team Member: | Ross Rawlings MCIHT MSoRSA
Hampshire Engineering Services |
- 1.3 The Road Safety Audit comprised an examination of the documents provided, as listed in the attached Road Safety Audit Brief. The Audit Team visited the site together, on 22 May 2024 at 2:00pm. During the visit the weather was fine and dry, and the existing road surface was dry. Traffic conditions were moderate with low levels of pedestrian and cycle activity observed during the site visit.
- 1.4 The audit has been carried out in accordance with the requirements specified in Hampshire County Council's Technical Guidance Note 18. The Road Safety Audit 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 design to any other criteria.
- 1.5 All problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme.
- 1.6 All references to diagram numbers refer to the Traffic Signs Regulations and General Directions 2016 (TSRGD).

2 Departures from Standards

- 2.1 All Departures from Standard are listed in the attached Road Safety Audit Brief.

3 Items raised at previous stage audits

- 3.1 The Audit Team has not been made aware of any previous road safety audits on this scheme.

4 Items raised at this Stage F Audit

4.1 Problem

Location: The proposed parallel Crossing on Chalton Road, on the approach to Folly roundabout.

Summary: The risk of collisions between vehicles and pedestrians/cyclists.

The intervisibility between cyclists/pedestrians approaching the south side of the parallel crossing and vehicles travelling north along Chalton Road may be restricted by the bridge parapet and vegetation. This will increase the risk of collisions between vehicles and cyclists/pedestrians on the crossing or shunt type collisions on the approach.

Recommendation: Ensure that there is adequate visibility for drivers and cyclists/pedestrians.

4.2 Problem

Location: The proposed Parallel Crossing on Charlton Road, on the exit from Folly roundabout.

Summary: The risk of collisions between vehicles and pedestrians/cyclists.

The proposed parallel crossing is located close to the exit from a large roundabout with high traffic speeds, and pedestrians/cyclists may be unable to determine the speed and direction of approaching vehicles. This will increase the risk of collisions between vehicles/pedestrians on the crossing, or shunt type collisions on the roundabout circulatory.

Recommendation: Unless the roundabout can be redesigned to constrain speeds and control the path of vehicles, a parallel crossing should not be provided.

4.3 Problem

Location: The proposed uncontrolled crossing on West Street (alternative option 2).

Summary: The risk of pedestrians crossing between queuing traffic, increasing the risk of vehicle/pedestrian collisions.

The proposed uncontrolled crossing is located in close proximity to the proposed signalised junction, in an area where vehicles (including a high volume of buses) are likely to be queuing. As a result, pedestrians may cross between vehicles and there is a risk of collisions with eastbound vehicles.

Recommendation: Do not progress with this option.

4.4 **Problem**

Location: The proposed priority crossing on Waterloo Court, at the junction with Western Avenue.

Summary: The risk of conflict between vehicles and cyclists on the crossing.

The large kerb radius on the north side of the junction will not adequately restrict the speed of vehicles turning left into Waterloo Court, and this will increase the risk of collisions with cyclists on the priority crossing.

Recommendation: Tighten up the junction radius to reduce vehicle entry speeds.

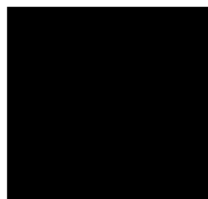
5 Audit team statement

We certify that the terms of reference of the audit are as described Hampshire County Council's Technical Guidance Note 18.

Audit Team Leader

Steve Willoughby MCIHT, MSoRSA, HE RSA Cert. Comp.
Group Engineer,
Road User Audit Team
Hampshire County Council

Signed:

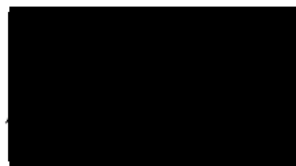


Date: 04/06/2024

Audit Team Member

Ross Rawlings MCIHT, MSoRSA, HE RSA Cert. Comp.
Principal Engineer,
Road User Audit Team
Hampshire County Council

Signed:



Date: 05/06/2024



Road Safety Audit Brief

Scheme Name:	Andover – Western Avenue				
Job Number:	RJ509237				
Road Safety Audit Stage: <i>(X as appropriate)</i>	Feasibility (F) X	Preliminary (1)	Detailed (2)	Combined (1/2)	As Built (3)

Site & Scheme Description

The scheme, which is being designed in collaboration with multiple third parties, seeks to transform a large gyratory found on Western Avenue, Andover into a green space that is accessible to the public. To accommodate this, the Eastern side of the gyratory is to be closed to traffic and converted into park space, with landscaping works and changes to the River Anton. HES have been commissioned to design the required highway changes, which mainly focus on West Street including the bus station, along with Waterloo Court. Both roads require new junctions to connect with the remaining section of Western Avenue which will become two-way adjacent to the park.

There are other smaller elements being designed by HES, such as a high-speed cycle provision that'll run on the Western side of the new park, and improvements to the existing pedestrian/cycle provision North and South of the proposed park, including an improved crossing facility across Charlton Road, adjacent to Folly Roundabout.

Existing conditions of roads within design extents:

Road name	Existing speed limit	Existing peak hour traffic volume
A3057 Western Avenue	40mph	Northbound peak: 645 Southbound peak 590
Folly Roundabout	40mph	No data
Charlton Road	40mph for first 60m from Folly Rbt, 30mph thereafter	No data
West Street	30mph	348
Chantry Street	30mph	No data
Waterloo Court	30mph	383

[Western Avenue Andover ATC JM.xlsx](#)

ANPR Origin Destination surveys indicated a peak flow of 347 vehicles exiting West Street onto Western Avenue, recorded in the 16:45 to 17:45 window.

[ID-0224-0098 Western Avenue Andover - ANPR OD Report - 18 04 2024.xlsx](#)

[ID-0224-0098 Western Avenue Andover - ANPR OD Report - 20 04 2024.xlsx](#)

Although there had been early discussion entertaining a reduction in speed limit on Western Avenue to 30mph, it is unknown if this will be supported by all relevant parties. The current design is suitable for a speed limit of 40mph, with 1.0m horizontal separation between carriageway and cycleway, reduced to the absolute minimum of 0.5m at constraints.

Non-Motorised Users

There is a significant pedestrian desire line in a North/South direction through the Lidl Car park, with pedestrian traffic typically travelling to or from the Chantry Centre and bus station. Andover train station is located to the West of the scheme, with sign-posted pedestrian and cycle routes crossing the river at West Street before crossing Western Avenue through an underpass. There is also a separate footbridge adjacent to the underpass. Andover Leisure Centre and Andover College are situated close to West Street, with pedestrian movements that travel around the eastern side of West Street to and from these destinations.

Collision Data

[RJ509237-HEH-SiteInfo-Accident Stats-Plot 2018-2022.pdf](#)

[RJ509237-HEH-SiteInfo-Accident Stats-Details 2018-2022.pdf](#)

Departures & Relaxations

- Potential issue surrounding crossing facility type for Charlton Road, if a reduction in speed limit is not possible.

List of included documents and drawings

General Arrangement Sketches

[RJ509237-HEH-HGN-40012558-SK-CH-0100 GA OVERVIEW & SHEET LAYOUT S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0101 GENERAL ARRANGEMENT S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0102 GENERAL ARRANGEMENT S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0103 GENERAL ARRANGEMENT S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0104 GENERAL ARRANGEMENT S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0105 GENERAL ARRANGEMENT S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0106 GENERAL ARRANGEMENT S2-P02.pdf](#)

The above sketches provide the layout for the scheme as a whole with Optioneering work being focussed on West Street (inc Bus Station) and the West Street/Western Avenue junction:

West Street / Bus Station Preferred Layout

[RJ509237-HEH-HGN-40012558-SK-CH-1001 - BUS STATION FORECOURT OPTION 1a BUS BAYS RETAINED S2 P03.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0002 - WEST STREET OPTION 2 FOOTWAY & TAXI BAYS NARROWED S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0004 - WEST STREET OPTION 2 SWEEP PATH ANALYSIS S2-P02.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0009 - West Street Loading Bay & Bus Stand Tracking S2 P01.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0010 - WEST ST CHANTRY ST HGV & DELIVERY MOVEMENTS S2-P01.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0107 RELOCATED TAXI BAY & BUS STAND OPTIONS S2 P01.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-0108 VEHICLE TRACKING FOR POSSIBLE BUS STAND LOCATIONS S2 P01.pdf](#)

Plus the following sketches to be shared:

RJ509237-HEH-HGN-40012558-SK-CH-0006 Portland Grove Refuse Vehicle Access

RJ509237-HEH-HGN-40012558-SK-CH-2001 Lidl Car Park Layout Option 1

RJ509237-HEH-HGN-40012558-SK-CH-2002 Lidl Car Park Layout Option 2

RJ509237-HEH-HGN-40012558-SK-CH-2003 Lidl Car Park Layout Option 3

Following some initial feasibility work, the preferred arrangement for West Street and Andover Bus Station will see the entire eastern arm of the Western Avenue closed to traffic, to maximise space available for the Riverside Park. West Street will be made two-way with the southern connection onto Western Avenue also closed. All traffic will use the northern West Street/Western Avenue junction which will be signalised (see below).

Proposed layout drawings for the preferred options are included along with swept path analysis. Further sketches provide swept path analysis for the West St/Chantry St junction and the existing taxi bays/proposed bus stand and loading bay. A loading bay is being provided to accommodate delivery vehicles to the Bus Station Café (Costa) and a bus stand due to the loss of existing stands on Western Avenue.

A number of alternative bus stands locations are suggested, and a sketch is provided with the options.

Options have been provided for changes to the Lidl car park layout because the existing access onto Western Avenue will be closed. Whilst the audit relates to highway safety, any comment on the various layouts would be welcomed.

Western Avenue/West Street Junction Options:

[RJ509237-HEH-HGN-40012558-SK-CH-2501 WEST STREET JUNCTION OPTIONS 1 & 2 S2-P01.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-2502 WEST STREET JUNCTION OPTION 3 S2-P01.pdf](#)

[RJ509237-HEH-HGN-40012558-SK-CH-2503 WEST STREET JUNCTION OPTIONS 4 & 5 S2-P01.pdf](#)

5 potential options have been identified for the Western Avenue/West Street junction. All options utilise the same layout for the Western Avenue approaches, and all include a

dedicated cycle crossing with cycle signal equipment. The optioneering focuses on the West Street arm to facilitate pedestrian and cycle desire lines, which are constrained due to the location of the bridge. Consideration is also being made for the impact that the layouts have on bus service efficiency (primarily determined by set back of the stop line and subsequent delays with signal timings). The revised layout for West Street means that all buses travelling to and from the bus station (peak flow of 24 each way/hour) will travel through this junction.

Option 1 – Toucan crossing and uncontrolled (pedestrian only) crossing set back into West Street

Option 1 utilises a controlled toucan crossing to capture the Northwest ped/cycle desire line, with a section of shared use footway on the southern side of West Street to connect to the proposed park promenade. The Northeast desire line is catered for by an extension of the footway adjacent to the Lidl Supermarket, which would seek to take NMUs away from queuing traffic. Current proposals limit this to pedestrians only, but the footway could be widened into shared use if required, to connect to the shared facility on the North side of West Street. Footway/cycleway continuation along the Southern side of West Street is not possible without significant tree loss.

Option 2 – Toucan crossing and uncontrolled crossing in-line with park promenade

Option 2 shares many design features with option 1, with the exception of the uncontrolled facility within West Street, which is positioned to be in line with the exit to the proposed park promenade

Option 3 - Toucan crossing and uncontrolled crossing in-line with park promenade including 3m refuge

Option 3 utilises an uncontrolled crossing alignment similar to option 2, with the addition of a 3m refuge island on West Street, to reduce/remove potential risk of pedestrians emerging from between queuing traffic.

Option 4 – Setback stop line and toucan crossing to East of bridge deck

Option 4 relocates the stop line further into West Street, to capture the NMu desire line from the proposed park promenade. There is subsequent delay on the traffic signal cycle.

Option 5 – Setback stop line and wide toucan crossing across width of bridge deck

Option 5 utilises the same stop line positioning as option 4, but with a significantly wider pedestrian/cycle crossing which spans much of the bridge deck.

Scheme Specific Health & Safety Checklist and Risk Assessment

[R.J509237-HES-HSCDM-Scheme Specific Checklist and Risk Assessment.docx](#)
[R.J509237-HES-HSCDM-Scheme Specific Checklist and Risk Assessment.docx](#)

Prepared By:

Name: Ryan Humby

Signed:



Organisation: HES Highways

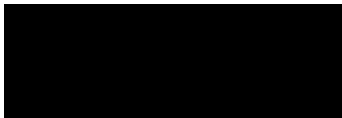
Road Safety Audit Response Report

All the problems raised by the Road Safety Audit Team should be given due consideration.

Item No.	Problem Accepted (yes/no)	Recommendation Accepted (yes/no)	Designers Response
4.1	Yes	Yes	The proposed crossing is to be relocated further south along Charlton Road whether there will be an adequate visibility envelope entirely within the highway. There is adequate width available to maintain a grassed verge immediately in front of the bridge parapets which will provide sufficient separation to justify leaving the existing parapets in place (and not upgrading to 1.5m high). Consideration shall also be given to extending the existing 30mph speed limit north, so it is closer to Folly Roundabout, and the proposed parallel crossing located within it.
4.2	Yes	Yes	In conjunction with relocating the proposed crossing as per the response above, measures to reduce roundabout exit speeds will also be explored.
4.3	Yes	Yes	This option shall not be taken forward
4.4	Yes	Yes	Tracking is to be carried out to identify the tightest radius that can be used.

In accordance with Technical Guidance Note 18, should any of the problems and/or recommendations not be excepted, an Exception Report will be required. If there is more than one exception, then each must be considered and approved separately.

Prepared by:

Signed:.....  (Design Team Leader)

Date: 10/06/2024.

Approved by:

Signed:..  ...(Project Sponsor)

Date:.....