Transport for Buckinghamshire

Stage 1 ROAD SAFETY AUDIT REPORT.

Traffic Calming & Shared Space Scheme
Ivinghoe Village

Contents:

Simon Dando Contract Director • County Hall •
Walton Street • Aylesbury • Buckinghamshire • HP20 1UY

ROAD SAFETY AUDIT REPORT.

Traffic Calming & Shared Space Scheme
Ivinghoe Village

To: Pete Smyth – Area Scheme Delivery Team.

From: Naomi Povey – Road Safety Monitoring Technician, Network Safety Team.

Date: 05/12/2016 Tel Ext: 01296-383001

ROAD SAFETY AUDIT.

1. INTRODUCTION

1.1 This report results from a request for a Stage 1 Road Safety Audit, of a proposed Shared Space concept scheme for Ivinghoe Village.

1.2 The report was commissioned by Ivinghoe Parish Council and produced by Hamilton-Baillie Associates and outlines measures to be implemented at various locations within the village. The aim of the scheme is to "help to reduce speeds and maintain the quality, safety and civility of Ivinghoe's village environment, whilst coping with the realities of rural traffic management".

1.3 All the proposed sites are already subject to a 30mph speed limit.

1.4 The Safety Audit was carried out by:

Peter Chapman, MCIHT. MSoRSA. (Audit Team Leader)
HE Approved RSA Certificate of Competency.
Collision Investigation & Analysis Officer, Network Safety Team, Transport for Buckinghamshire.

Naomi Povey, MCIHT. MSoRSA (Audit Team Member)
HE Approved RSA Certificate of Competency.
Road Safety Monitoring Technician, Network Safety Team, Transport for Buckinghamshire.

2. Documents and Methodology

2.1 The audit was undertaken with reference to the report: 'Ivinghoe, Buckinghamshire: Safety, civility and lower speeds in an historic village', Version 02, December 2015.

2.2 A site meeting was carried out on Wednesday 12th October 2016 between 10.00 hrs and 13.30 hrs. The weather conditions were fine and dry. The site was inspected in daylight.

2.3 The audit has been based on the principles contained within the Highway Advice note HD 19/15 (Road Safety Audit) of the Highways Agency's Design Manual for Roads and Bridges (DMRB). We have examined and reported on the road safety implications of the proposal. The proposal has not been examined in the compliance of the design to any other criteria. The absence of comments should not be taken to imply compliance.

2.4 The format of this report has potential safety problems identified as **Problem** normally with a **Recommendation** of action. In addition, other pertinent safety matters that the auditor thinks are important will be mentioned by way of **Comment.** The order of concerns does not indicate the degree of safety concern.

2.5 All of the problems identified are considered to be of sufficient importance to require action. The recommendations in this report refer to means of overcoming an identified road safety problem. There may be other acceptable ways in which the problems may be overcome and these may be preferable when other practical problems are considered in addition to safety. We will be pleased to discuss alternative solutions to the problems identified in the report.

2.6 PREVIOUS SAFETY AUDITS
None Known:

3. ROAD SAFETY AUDIT - ITEMS RESULTING FROM THIS STAGE 1 INSPECTION.

IVINGHOE EASTERN ENTRY

3.1 PROBLEM — Curve of bend at proposed junction priority modification.

1. View of junction from the north.

2. View of B489 westbound approach to the junction.

The existing junction layout between the B488 Church Road and the B489 Tring Road, presents the B488 Church Road as the major road, with the B489 Tring Road joining from the northeast, at a downhill gradient. Approach speeds of vehicles travelling southwest to give way at the junction were observed to be high. A resident who lives at the property named 'The Warren', on the junction, explained their concern at the number of vehicles which approach at speed, fail to stop at the junction and crash into the direction sign and vegetation opposite.
Should the junction priorities be modified to change the section of B488 Church Road north of the junction into the minor road, the angle of the bend will be very sharp. This, in addition to the adverse camber of the carriageway at this location increases the likelihood of loss of control collisions, or sudden braking and loss of control.

RECOMMENDATION

Retain the existing junction priority and reposition the proposed village entrance feature to a point further north on B488 Church Road.

3.2 PROBLEM

The vehicular access to property named 'The Warren' will be located on the exit of the bend.

3. View of junction from the south, showing the vehicular access to 'The Warren' on the right of the photograph, in between 2 of the black and white verge marker posts.

The vehicular access to 'The Warren' is currently located at a point where traffic stopping at the give way marking of the junction of B489 Tring Road, allows entrance and exit of the property easily. If the junction priorities are changed, the vehicular access will be located on the exit of the bend. This increases the risk of collisions involving vehicles exiting the property and being hit by vehicles travelling south around the bend. It also increases the risk of shunt collisions involving a vehicle waiting to turn left into 'The Warren' being hit by a vehicle travelling south around the bend.

RECOMMENDATION — Retain the existing junction priority and reposition the proposed village entrance feature to a point further north on B488 Church Road.

3.3 PROBLEM — New trees planted on the bend at the proposed entry to Ivinghoe Village.

The proposed new trees planted at the new entrance to Ivinghoe Village pose a serious risk to any drivers who lose control on the new bend, particularly in the future when they are mature. These trees are on the outside of the proposed 90 degree bend and therefore on the exit path of any vehicle losing control in either direction.

RECOMMENDATION — The recommendation of the Audit Team would be to not plant trees at the new entrance. If the recommendations to problems 3.1 and 3.2 are accepted, the planting of trees to enhance a village entrance feature on the straight section of Church Road, further north than currently proposed, would not pose the same risks to drivers, and would be acceptable to the Audit Team.

GREAT GAP

3.4 PROBLEM — Vehicles entering a bend in the centre of the carriageway.

4. Southbound view of approach to the bend.

The proposed surface treatment and the removal of the centre lines, both intended to visually narrow the road, encourage vehicles to drive in the centre of the carriageway. There is a risk of head-on or side swipe collisions as vehicles enter the bend. The removal of the centre lines also increases the risk of vehicles cutting the across the curve of the bend, entering the opposing carriageway and being involved in a collision with a vehicle travelling in the opposite direction

RECOMMENDATION — Retain the centre line around the bend.

3.5 PROBLEM

New trees planted at the extents of parking area.

5a & 5b. Southbound view of existing village gateway entrance and parking area to the right.

The locations of the newly planted trees, shown on the photographic impression on page 11 of the report, are at either extent of the proposed upgraded parking area. These are different locations than shown on the proposed plan drawing of the new parking area show on page 10, where they are either side of the carriageway on the northern entrance to the village.
It is felt that if the trees are planted at either extent of the parking area, then in the future when mature they may restrict the visibility of vehicles exiting the parking area, leading to side impact or head on collisions with vehicles travelling on the main carriageway.
In addition, the southernmost tree also presents a risk of far greater injury to a driver, should they lose control and strike it on exiting the bend to the south.

RECOMMENDATION

The Audit Team feels that the safest and most appropriate location for any newly planted trees is at the current southbound entrance to the village, where the existing Great Gap nameplate is situated. They would be situated far enough away from the parking area to not cause any restrictions to the visibility of cars exiting, and also is on a straight approach, so the risk of loss of control collisions is lower.

FORD END BRIDGE

3.6 PROBLEM

Removal of carriageway center lines.

6a. Northwest approach to Ford End Bridge.

6b. Southeast approach to Ivinghoe from Ford End Bridge.

The removal of the carriageway center lines increases the risk of head on collisions around bends.

RECOMMENDATION

Whilst the Audit Team does not have issue with the removal of the centerlines across the bridge, they should be retained around the bend southeast of the bridge. Additionally, appropriate 'Road Narrows' warning signage should be installed prior to the bridge on both approaches.

MAUD JANE'S CLOSE

3.7 PROBLEM

Lack of clarity over whether pedestrians have right of way at crossing points.

7. Southeast approach to Ivinghoe showing junction of Maud Jane's Close to the left.

The proposed informal courtesy crossings for pedestrians show no delineation between the footway and the carriageway; they are just one continuous extension of the footway material, across the road. This is likely to lead to confusion as to whose right of way it is, and may lead to pedestrians stepping out in front of vehicles and being injured.

RECOMMENDATION

Provide clear delineation between the footway and carriageway, and a visible reminder to pedestrians that they are leaving the footway.

3.8 PROBLEM

Visibility of pedestrian crossing points in darkness.

There is no system of street lighting on Station Road and the lack of contrast in colour between the carriageway and the informal pedestrian crossing points means that in darkness the crossing point will not be sufficiently visible to drivers. This, in addition to the lack of clarity over whose right of way it is at the crossing, could lead to pedestrian collisions.

RECOMMENDATION

Install the appropriate level of street lighting at the pedestrian crossing point and provide more contrast between the crossing and the carriageway.

3.9 PROBLEM

Conflict between vehicles on the carriageway and vehicles using the proposed drop-off area.

8. Proposed drop-off area opposite Maud Jane's Close

The proposed drop-off area is opposite the junction with Ladysmith Road and adjacent to an informal roundabout feature. The artist's impression shows that it is intended for vehicles to park at a right-angle to the carriageway. This means that vehicles using the drop-off area will have to reverse out onto the carriageway, at a point where multiple turning movements at the junction may already be taking place, and also vehicle speeds travelling on Station Road downhill are likely to be faster. This is likely to lead to vehicle vs. vehicle collisions, but also with a possibility of pedestrian collisions involving people who have been dropped off here.

RECOMMENDATION

Design the proposed drop-off area so that vehicles park alongside the carriageway and are able to enter and exit without reversing.

CHURCH ROAD TRANSITION

4.0 PROBLEM — Removal of speed cushions is likely to result in increased vehicle speeds.

9. Northwest approach to Ivinghoe showing junction of Vicarage Lane to the right.

Whilst the existing speed cushions only provide a modest traffic calming effect, if they are removed and there are no physical measures in place, vehicles speeds are almost certainly going to increase. Although the proposed change in tone and colour of the surface may influence a reduction in vehicle speeds in the short term, this effect is likely to decrease as drivers become used to the environment and lack of physical traffic calming measures. This may increase the possibility of speed related collisions.

RECOMMENDATION — Retain the existing speed cushions, or install other appropriate physical measures to force drivers to reduce vehicle speeds.

4.1 PROBLEM — Removal of centre-lines around the bend.

The proposed removal of the centre-lining around the bend at the junction with Vicarage Lane, in addition to the change in colour of road surface along the road, will encourage drivers to drive more centrally in the carriageway. This may lead to head-on or side swipe collisions on the bend, particularly in the hours of darkness when the delineation of the carriageway will be less clear.

RECOMMENDATION — Retain the centre-lines around the bend.

APPROACH TO THE CENTRE – CHURCH ROAD

4.2 PROBLEM

Removal of speed cushions is likely to result in increased vehicle speeds on approach to proposed new informal junction.

10. View of southwest approach to village centre and location of proposed new informal junction.

As highlighted in 4.0 - Whilst the existing speed cushions only provide a modest traffic calming effect, if they are removed and there are no physical measures in place, vehicles speeds are almost certainly going to increase. Although the proposed change in tone and colour of the surface may influence a reduction in vehicle speeds in the short term, this effect is likely to decrease as drivers become used to the environment and lack of physical traffic calming measures. This may increase the possibility of speed related collisions.

RECOMMENDATION

Retain existing speed cushions on the approach to the junction with Station Road.

IVINGHOE CENTRE

4.3 PROBLEM

Visibility and understanding of proposed new junction in darkness.

There is no system of street lighting at the junction, and with the absence of any carriageway centre lines or junction give way markings, the visibility of the junction in darkness is likely to be very poor.

RECOMMENDATION

Ensure that measures installed are adequately lit or sufficiently visible to drivers in darkness.

4.4	PROBLEM	Lack of physical traffic calming measures on the approach to the junction from Church Road. The proposed removal of the speed cushions on Church Road is likely to result in the increase of vehicle speeds on the southwest approach to the junction. Drivers who may be approaching from the northeast at speed will exit the bend then be confronted with an ambiguous junction arrangement where there is no clear priority. This could lead to shunt collisions as drivers brake suddenly, as well as turning movement collisions at the junction.
	RECOMMENDATION	Retain speed cushions or install an appropriate physical measure to slow vehicles on the approach to the junction.
4.5	PROBLEM	Lack of kerb-line and removal of distinct footway are outside the Church. The removal of the footway area outside the Church entrance and its incorporation into the proposed new junction surface treatment is likely to lead to an increase in vehicles using this as a parking area. This may lead to collisions involving vehicles reversing out of the area onto the new junction, and also poses a risk to pedestrians using the bus stop and entrance to the church.
	RECOMMENDATION	Retain a distinct kerb-line delineating the footway area outside the church entrance, or install appropriate measures to deter parking across the area outside the church and adjacent to the bus stop.
4.6	PROBLEM	Lack of delineation between footway and the proposed elliptical shaped surface treatment. The proposed elliptical shaped surface treatment across the junction starts at the entrance to the playing fields and continues across the junction into the entrance to the church. There is no delineation between the pedestrian area and the carriageway, and lack of clarity over whose right of way it is. Bearing in mind that the playing fields and attached playground are used heavily by children, the risk of a child pedestrian collision at the junction is increased.
	RECOMMENDATION	Provide clear visible reminders that pedestrians do not have automatic right of way across the junction.
4.7	PROBLEM	Lack of clarity over junction priorities. Whilst the Audit Team accepts that the objective of the scheme is to create a “deliberate element of ambiguity and uncertainty for drivers” it must be recognised that this is a main B classified road, and as such has a significant traffic flow, particularly at peak times. The removal of ‘Give Way’ warning signs and road markings at the junction, may lead to turning movement collisions. Combined with this, the removal of the speed cushions on Church Road increases the likelihood of vehicles approaching the junction at a higher speed.

RECOMMENDATION Install a junction system with a more defined priority.

THE VILLAGE SHOP & LIBRARY

4.8 PROBLEM Courtesy pedestrian crossing implies pedestrians have right of way.

The proposed courtesy crossing will lead from a newly created pedestrian entrance to The Lawn playing field, to the village shop and library on the opposite side of the road. The contrasting surface used for the crossing leads continuously from the entrance to the Lawns across the carriageway implying a priority to pedestrians. This could lead to pedestrians stepping out in front of traffic thinking that they have right of way.

RECOMMENDATION Provide a clear visible reminded to pedestrians that they do not have automatic priority.

4.9 PROBLEM Visibility of pedestrians and parking in the vicinity of the proposed crossing point.

11. Location of proposed informal pedestrian crossing outside the village shop leading to The Lawn playing field.

Observations during the Safety Audit noted that parking is already at a premium, and Ivinghoe Parish Clerk spoke with us whilst we were on site regarding the existing problem they have with vehicles parking on the grass verge area adjacent to The Lawn; the parish council was installing wooden planters on the grass verge to prevent this at the time. The installation of the crossing point will remove a parking space from outside the village shop, however as the crossing is only a courtesy crossing, there is nothing to prevent a car parking across it and blocking it for pedestrians, or obstructing visibility by parking close to the crossing area. This may force pedestrians to attempt to cross between vehicles at points where approaching drivers are not expecting them to, increasing the risk of pedestrian collisions.

RECOMMENDATION — Provide a physical measure to prevent parking across the entrances to the crossing.

BROOKMEAD SCHOOL

5.0 PROBLEM — Parking outside school entrance.

The removal of 'School Keep Clear' and associated yellow zig-zag road markings outside the school entrance, with no alternative measures installed, is likely to lead to an increase in vehicles parking outside the school to drop off and/or pick up children. This congestion may obscure pedestrians, particularly children, leading to pedestrian collisions.

RECOMMENDATION — Retain existing 'School Keep Clear' and associated yellow zig-zag road markings outside school entrance

5.1 PROBLEM — Visibility of bollards in the dark.

The proposed bollards are not standard and possess no reflective properties; this combined with the absence of centre lines and a narrowed carriageway, there is an increased risk of vehicles hitting the bollards in the dark.

RECOMMENDATION — Install bollards with adequate reflective properties.

5.2 PROBLEM

Removal of physical speed reduction measures on the approach to Brookmead School.

12. View of existing speed cushions on the downhill westbound approach to Brookmead School.

Currently there are speed cushions on the section of the B489 High Street to the east of Brookmead School, which whilst only provide a modest speed reduction effect, act as a physical reminder to drivers to slow down. The removal of these is likely to lead to an increase in vehicle speeds, particularly of vehicles travelling on the downhill westbound approach to the school, which may result in speed related collisions.

RECOMMENDATION

Retain the speed cushions on High Street.

5.3 PROBLEM

Reduced carriageway width outside school Brookmead School.

As noted in Manual for Streets, “Carriageway widths should be appropriate for the particular context and uses of the street”. Whilst the Audit Team appreciate the desire to slow vehicle speeds and encourage drivers to take more care when passing the school, it should be recognised that this is a B classified road which is used by Heavy Goods Vehicles, and reducing the carriageway width to less than the minimum width required for 2 HGVs to pass, without any formal priority system, is likely to introduce safety issues.
The area outside Brookmead School is already under strain at peak times, particularly in the morning. Reducing the width of the carriageway is likely to increase congestion at these times and may lead to vehicles having to reverse and manoeuvre to allow other vehicles to pass. These type of vehicle movements, particularly in an area where a high number of pedestrians are present, could lead to pedestrian collisions.

RECOMMENDATION — Retain actual carriageway width but narrow visually, allowing sufficient carriageway width for 2 HGVs/buses to pass each other.

5.4 PROBLEM — Removal of centre-lines around the bend on B489 High Street.

The proposed removal of the centre-lining around the bend on B489 High Street is likely to encourage drivers to drive more centrally in the carriageway. This may lead to head-on or side swipe collisions on the bend, particularly in the hours of darkness when the delineation of the carriageway will be less clear.

RECOMMENDATION — Retain a centre-line through the bend

4. AUDIT STATEMENT

We certify that this audit has been carried out in accordance with HD 19/15.

The examination has been carried out with the sole purpose of identifying any features of the site and plans that raise road safety concerns. The problems identified have been noted in this report together with associated safety improvement suggestions for consideration.

Audit Team Leader:
Peter Chapman, MCIHT. MSoRSA.
HE Approved RSA Certificate of Competency.

Signed: Peter Chapman
Date: 05/12/2016

Audit team Member:
Naomi Povey, MCIHT. MSoRSA
HE Approved RSA Certificate of Competency.

Signed: Naomi Povey
Date: 05/12/2016

5. PLAN WITH PROBLEM LOCATIONS.