



Economic Prosperity, Environment and Highways Board  
9 June 2016

## **Road Safety Improvements on Bridge Street, Guildford**

**Purpose of the report:** Performance Management

Following a road traffic collision on 20 February 2016 that led to the deaths of two pedestrians on Bridge Street in Guildford, a petition was submitted to the council on 17 May 2016 to improve road safety on Bridge Street. It was resolved by the council that this issue and proposals should be scrutinised by the Economic Prosperity, Environment and Highways Board.

### **Introduction:**

1. There was a road traffic incident on Bridge Street on 20 February whereby a vehicle left the road and killed two pedestrians on the footway. This report describes the extent and nature of the history of road casualties on Bridge Street and assesses options to reduce the risk of casualties in the future, based on this analysis.

### **Analysis of the History of Road Casualties on Bridge Street**

2. Every time there is a road traffic collision resulting in injury that is reported to the police, the police record the circumstances of the collision, road users and vehicles involved using a national standard form called "STATS19". This information is used by highway authorities and police to identify collision hotspots and any causes and patterns that might be ameliorated by highway improvements or enforcement. A summary of the "STATS19" information is available to the public via [www.crashmap.co.uk](http://www.crashmap.co.uk). Collisions that do not result in injury are not systematically recorded by the police and so are not included within such analysis.
3. The collision plot in Annex 1 shows the location of all collisions resulting in personal injury taking place on Bridge Street since January 2011 to the end of February 2016 (a five year and two month period), according to the GIS coordinates in the "STATS19" police data. Collisions resulting in injury to pedestrians are highlighted in red, and collisions resulting in injury to other categories of road user are highlighted in blue. Concentric circles show that more than one collision took place at the same location.

4. There was a total of 26 collisions with 19 of these involving injury to pedestrians. The following Table 1 summarises the number of casualties resulting from these collisions, by road user type and severity. This includes the two fatal pedestrian casualties. There may be more than one casualty resulting from a single collision.

**Table 1: Road Casualties on Bridge Street by Road User Type and Severity since January 2011 to the end of February 2016**

Road user type	Severity			Total
	Fatal	Serious	Slight	
Pedestrian	2	3	16	21
Car occupant	-	1	5	6
Cyclist	-	-	1	1
Motorcyclist	-	-	1	1
Bus occupant	-	-	2	2
<b>Total</b>	<b>2</b>	<b>4</b>	<b>25</b>	<b>31</b>

5. The collision plot in Annex 1 and the data Table 1 shows that the overwhelming majority of road casualties on Bridge Street (21 out of 31) were pedestrians.
6. More detailed analysis of the collisions resulting in injury to pedestrians is possible by inspection of the “balloon diagram” collision plot in Annex 2. This plot provides a visual summary in diagrammatic form of the location and the movements of the vehicle and pedestrians involved in each collision, alongside whether the road was wet or dry, the time of day and the date.
7. The circumstances leading to the recent fatal pedestrian casualties (whereby a vehicle left the road and mounted the footway) did not follow a pattern of similar incidents at the same location. This was the only injury collision of its kind at this location in recent years where a vehicle has left the road and mounted the footway. As with all fatal road collisions this incident is subject to detailed police investigation, and evidence on the circumstances of the collision will be presented to the coroner in due course. The police enquiries are continuing, but on the information that is available at this time, the cause of the loss of control of the vehicle is not thought to be as a result of any highway defect or deficiency in the design of the highway environment.
8. Annex 2 shows that most of the pedestrian casualties (15 out of 21) took place at the junction with Onslow Street. Of these, eight involved pedestrians crossing the northbound traffic lanes turning left from Bridge Street, one involved a pedestrian crossing the southbound traffic lanes turning right out of Bridge Street, and six involved pedestrians crossing the southbound traffic lanes from Onslow Street.

9. Out of the 21 pedestrian casualties taking place on Bridge Street, seven of these took place in the late evening/early morning between 11pm and 1am. This is an area with several pubs and night clubs, and so can be busy with pedestrians at this time of night.

## **Summary**

10. The recent collision resulting in the deaths of two pedestrians (whereby the vehicle left the road and mounted the footway) at the western end of Bridge Street does not form part of a pattern of similar collisions at this location. Subject to ongoing police investigations it is not thought that the cause of the loss of control of the vehicle was as a result of any highway defect or deficiency in the design of the highway environment. Therefore it would not be an effective use of resources to try to amend the highway at this location to reduce the risk of future similar collisions, because it is highly unlikely that an incident involving the same circumstances would take place again at the same location.
11. Instead analysis of all the injury collisions recorded by the police has shown that there is a pattern of pedestrian casualties focussed at the eastern end of Bridge Street at the junction with Onslow Street. These involved pedestrians being struck while in the road rather than on the footway.

<b>Possible Measures to Improve Road Safety on Bridge Street</b>
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## **Potential Major Scheme**

12. Since 2012 central government made funding available for large transport infrastructure projects that support economic growth via competitive bidding to Local Enterprise Partnerships. Surrey County Council is working closely with Guildford Borough Council to develop proposals for a substantial improvement of the highway network through Guildford town centre to enhance pedestrian, cycling and public transport facilities. Funding has been sought from the Enterprise M3 Local Enterprise Partnership through an Expression of Interest submitted on 31 March 2016 by Guildford Borough Council for a project that would reconfigure the gyratory from one way to two way traffic-flow in phases, leading to the eventual closure of Bridge Street to traffic other than buses. The aim of the bid is to monitor and assess the impacts on traffic and pedestrian flows and safety of each phase. The changes would then be implemented permanently if successful.
13. If the Expression of Interest and subsequent bid is approved by the Enterprise M3 Local Enterprise Partnership, then it is envisaged that the trial scheme would begin in the financial year 2018/19. If approved it would result in transformational changes to pedestrian safety and facilities in Guildford town centre, but as with any such large undertaking it will take several years to implement. Therefore officers have considered the suggestions made by the petitioners and other lower-cost safety improvements that could be implemented within a shorter timescale.

## Petitioners' requests

14. The petitioners were concerned with the poor pedestrian facilities on Bridge Street and made a number of suggestions:  
  
*“raising the pavement, installing iron railings alongside the pavement to stop people crossing, setting a 20mph limit, installing speed cameras, widening the pavement, and promoting the alternative route via the Odeon plaza”.*
15. Officers have carefully considered the suggestions made by the petitioners and provide a response on the likely effectiveness and feasibility of each of these in turn below.
16. **Raising the pavement:** Most pedestrian casualties took place while the pedestrians were crossing the road, mostly at the junction of Onslow Street. Therefore raising the pavement elsewhere on Bridge Street (presumably to prevent vehicles mounting the footway), would not address the main casualty problem.
17. Raising the pavement on its own would not necessarily prevent vehicles mounting the footway unless very high “trief” containment kerbing were used. If this were the case then pedestrian guard railing would be required to prevent pedestrians tripping over the “trief” kerbing, or to prevent them falling off a much higher footway onto the traffic lanes. Pedestrian guardrailing would not be feasible for the reasons described below.
18. It is not possible to raise the pavement outside the shops and businesses because the back of the raised footway would not tie in to the base of the properties, for example at the thresholds of the doorways.
19. **Installing pedestrian guard railing:** Most of the pedestrian casualties took place while the pedestrians were on the crossings at the junction with Onslow Street. Therefore attempting to prevent pedestrians from crossing elsewhere on Bridge Street would not address the main pedestrian casualty problem. Pedestrian guard railing is not designed to be strong enough and is not intended to be used to contain vehicles.
20. There are sections of the footway on the northern side of Bridge Street that are narrow. Pedestrian guard railing has to be set back from the kerb edge by 450mm in case it is struck or causes a hazard to passing vehicles or cyclists. Therefore installing any such guard railing would leave a very narrow footway which would be insufficient for the level of pedestrian flow on a busy street such as this, especially when there could be users of mobility scooters, wheelchairs or those with children in pushchairs.
21. **Setting a 20 mph limit:** National guidance and Surrey County Council's policy on speed limits includes the requirement that the minimum length over which any speed limit should extend is 600m (so as to avoid too many frequent changes in limit that would be confusing to drivers). Bridge Street is approximately 150m long so any consideration of a new

20 mph limit would need to incorporate at least the whole of the gyratory and portions of the approach roads. National guidance and Surrey County Council's policy, based on research evidence is that implementing lower speed limits on their own does not make much difference to vehicle speeds. Instead engineering measures are required to make a worthwhile difference to vehicle speeds if the existing speeds are much greater than the desired new lower limit. Therefore it is likely that extensive changes to the road layout and traffic calming would be required at various locations around the gyratory and portions of the approach roads for a 20 mph speed limit scheme to be successful. This would take substantial investment and would therefore only be possible as part of any future major scheme proposals.

22. **Installing speed cameras:** It is national policy and Surrey's policy that engineering solutions should be considered first, and that safety cameras should only be used as a last resort where there is a history of casualties and where speeds have been confirmed as excessive. Excessive speed over the 30 mph limit is not recorded as a factor in the collisions. Surrey police would not support the use of safety cameras on a new lower 20 mph limit introduced using signs alone as it is national policy that 20 mph schemes should be designed to be self enforcing through redesign of the road (with traffic calming if necessary) without the need for enforcement. Therefore it is recommended that effective speed management should be achieved through the use of engineering measures rather than safety camera enforcement.
23. **Widening the pavement:** It would not be possible to widen the pavement on Bridge Street without reducing the number of traffic lanes. An assessment of the impact of changing the layout of the gyratory including a reduction in the number of traffic lanes forms phase 1 of the major scheme proposals, and this will ensure that the wider impacts on traffic flow can be carefully assessed.
24. **Promoting the alternative route via the Odeon Plaza:** Surrey County Council and Guildford Borough Council have recently been successful in being awarded funding for a "Guildford Town Centre Transport Package" from the Enterprise M3 Local Enterprise Partnership. This includes the replacement of the pedestrian bridge over the river Wey between Walnut Tree Close and the Odeon Plaza with a wider bridge that could be shared by pedestrians and cyclists. This will improve the alternative route, but pedestrians will still need to cross Onslow Street at the junction with Bridge Street to reach the town centre.

### **Potential Lower Cost Options**

25. Officers have considered possible lower cost safety improvements that could be implemented within a shorter timescale at the junction of Bridge Street with Onslow Street. These are described below.
26. **Reposition the vehicle stop lines:** Currently the position of the vehicle stop lines at the junction of Bridge Street with Onslow Street are at the minimum of 1.7m from the pedestrian crossings. It is suggested that this could be increased to the maximum of 3m. This would mean there would

be a greater distance between any vehicles waiting to set off from the stop line and any pedestrians who may still be crossing at the end of the green man period, which may reduce the risk of conflict and collision.

27. **Review the pedestrian and traffic signal phasing and staging:** Currently the traffic signals on the gyratory (including at the junction of Bridge Street with Onslow Street) work as part of an Urban Traffic Control system. This means the level of traffic on each arm entering the gyratory and the level of traffic within the gyratory is monitored and the traffic signal timings are adjusted automatically to try to maximise the throughput of vehicles. This means that the signal timings for southbound traffic on Onslow Street entering the gyratory will vary in comparison with the signal timings for northbound traffic exiting Bridge Street onto Onslow Street. This means that pedestrians are required to cross Onslow Street using pedestrian signals in two stages, which on some occasions may conveniently take place one immediately after the other or at the same time, whereas on other occasions may require the pedestrian to wait in the central island for a period of time. This can create confusion, frustration and lead to risk taking by pedestrians.
28. Therefore it is suggested that the phasing and staging of the signals for this junction could be reviewed to see if the signal facilities for pedestrians could be improved (perhaps to allow pedestrians to cross the whole of Bridge Street in one stage). Consideration could also be given to the provision of pedestrian countdown signals to show pedestrians how much time they have to cross. This would improve the experience of using the crossing by pedestrians, and may reduce confusion, frustration and risk taking. Any proposals would need to be modelled to assess the impact of any changes on vehicle flows.
29. **Provide raised road tables at the crossing points:** It is not thought that there is much speeding over the 30 mph speed limit on Bridge Street, especially at the junction with Onslow Street. However travelling at the 30 mph limit through the junction could be considered an inappropriate speed given the large number of pedestrians that could be crossing or at the edge of the road waiting the cross. Therefore the provision of raised road tables at the crossing points would help to slow traffic down and highlight the presence of pedestrians to vehicle drivers travelling through the junction. Slower speeds through the junction would reduce the risk of collision, and would reduce the consequences should any collision take place.

## **Conclusions:**

30. The recent collision resulting in the deaths of two pedestrians (whereby the vehicle left the road and mounted the footway) at the western end of Bridge Street did not form part of a pattern of similar collisions at this location. Subject to ongoing police investigations it is not thought that the cause of the loss of control of the vehicle was as a result of any highway defect or deficiency in the design of the highway environment. Therefore it would not be an effective use of resources to try to amend the highway at this location to reduce the risk of future similar collisions, because it is highly unlikely that an incident involving the same circumstances would take place again at the same location.
31. Instead analysis of all the injury collisions recorded by the police has shown that there is a pattern of pedestrian casualties focussed at the eastern end of Bridge Street at the junction with Onslow Street. These involved pedestrians being struck while in the road rather than on the footway.
32. In the longer term it is hoped that a successful major scheme bid to the Enterprise M3 Local Enterprise Partnership would result in transformational changes to pedestrian safety and facilities in Guildford town centre, but as with any such large undertaking it will take several years to implement. Consequently officers have proposed lower cost options for possible implementation in the shorter term. These include the repositioning of the stop lines, a review of the pedestrian and traffic phasing and staging, and the provision of raised road tables at the crossing points.
33. These options would need to be subject to feasibility and design and then presented to Guildford Local Committee for approval and funding. The Guildford Local Committee will need to weigh up the opportunity to invest in these options in comparison with other schemes in their area, and will need to take into account the possibility that the major scheme bid would be successful and supersede the lower cost proposals in the following years.

## **Recommendations:**

34. It is recommended that:
  - a) officers commission feasibility and design work for the repositioning of the stop lines at the junction of Bridge Street with Onslow Street;
  - b) officers commission feasibility and design work for the implementation of raised road tables at the crossing points at this junction;
  - c) officers commission a review of the pedestrian and traffic signal phasing and staging at this junction; and
  - d) once completed, these options be presented to Guildford Local Committee for approval and funding.

<b>Next steps:</b>
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Officers will commission design and feasibility work and will report the results to the Guildford Local Committee.

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**Sources/background papers:**

Annex 1: Location of personal injury collisions on Bridge Street (January 2011 to end of February 2016)

Annex 2: "Balloon diagram" plot of pedestrian casualties on Bridge Street (January 2011 to the end of February 2016)

Annex 3: Guildford Borough Council Expression of Interest to the Enterprise M3 Local Enterprise Partnership