

BHCC Response to Little East Street Safety Audit

Risk Assessment Processes

To accurately assess the cost and benefits of carrying out remedial measures the likely risk of collisions should be understood. A formal Risk Assessment Process can be carried out within the context of road safety.

In brief, Risk Assessments assess both the likelihood of an event occurring along with the potential consequence of such an event. The combination of these two elements establishes the risk associated with an event. Such assessments are comparative in nature, but bring some limited objectivity to an otherwise subjective area of concern.

Factors affecting the likelihood of a collision on Little East Street can be summarised as being associated with traffic volume and vulnerable user volume (and the interaction of the two).

The probable consequences of injury resulting from a collision will depend on vehicle speed and the vulnerability of the road user to injury (e.g. a pedestrian). In a formal Risk Assessment a matrix of Likelihood versus Consequence gives us risks that can be defined as High, Medium or Low. Acceptable risk is one that is considered to be As Low As Reasonably Practicable (ALARP) and this should, ideally, be defined with the use of control collision data and based on Cost- Benefit Criteria.

The risk assessments reported in the previous section are based on a 4 X 4 matrix. The layout of this 4 X 4 matrix is shown below (a score of 4 is considered high, whilst 1 is low). When combining scores a relative risk score can be used to identify High (Red), Medium (Yellow) and Low (Green) risk features.

		Consequence			
		4	3	2	1
Likelihood	4	16	12	8	4
	3	12	9	6	3
	2	8	6	4	2
	1	4	3	2	1

The Risk Assessment identified four areas of interest. All 4 were rated as 'low risk' under the existing conditions and 'low risk' under the proposed conditions. Each area is outlined below, with the designer's response to each:

2.1 The increased use of Little East Street by HGV traffic

Existing Layout

- Likelihood of conflict – Very Low (very low pedestrian movement and low traffic volumes) – Score 1
- Consequence of conflict – Low (very low speed of vehicles) – Score 2
- Risk Score – 2 –Low

Proposed Layout

- Likelihood of conflict –Low (very low pedestrian movement and slightly increased traffic volumes associated with the removal of restrictions) - Score 2
- Consequence of conflict – Low (very low speed of vehicles) - Score 2
- Risk Score – 4 – Low

There is an increase in risk associated with the project, although the realisation of that increased risk may not be observable or measured by evidence of collisions. However it is noted that HGVs (over 7.5 tonnes) will only be able to enter the Old Town (via Black Lion Street) before 11am. As East Street will be open at this time, it could be expected that they would continue to use this route and not Little East Street (albeit the restriction is removed). It is likely that more vehicles up to 7.5 tonnes will use Little East Street between 11am and midnight but these will be the only vehicles which can enter the Old Town at this time.

Conclusions

The introduction of a speed reducing feature is unlikely to materially alter risk levels as observed speeds are very low and any speed hump may not directly reduce vehicle speeds. The consequence of any collision may still be medium / low due to the vehicle mass of HGVs.

Note: The original report contained a typo whereby the proposed layout's risk score of 4 was classified by the auditor as 'medium' when in fact according to the Risk Assessment Matrix a score of 4 is classified as 'low'. The auditor has confirmed this was an error and the classification has been corrected.

Designer Response:

There is not forecast to be a significant reduction in HGVs using Little East Street as HGVs are banned from the Old Town after 11am each day and will therefore be able to use East Street to exit the area.

For the large vehicles using the street swept path analysis shows that HGVs can manoeuvre safely through the street. This is regularly demonstrated in practice by the two dray lorries that currently make weekly deliveries.

It is necessary for HGVs to overrun the footway in places in order to manoeuvre through Little East Street. This currently happens in Little East Street and in several locations throughout the Old Town at no safety risk due to the low speeds of vehicles.

The proposal for Little East Street will involve relocating bollards to minimise footway overrun and so the proposed situation will be an improvement on the existing.

2.2 The anticipated speeds of vehicles using Little East Street (based on small vehicles)

Existing Layout

- Likelihood of conflict – Very Low (very low pedestrian movement and low traffic volumes) – Score 1
- Consequence of conflict – Very Low (very low speed of vehicles) – Score 1
- Risk Score – 1 – Very Low

Proposed Layout

- Likelihood of conflict –Low (very low pedestrian movement and slightly increased traffic volumes associated with the removal of restrictions) - Score 2
- Consequence of conflict – Low (very low speed of vehicles) - Score 1
- Risk Score – 2 – Low

There is a slightly increased risk associated with the project, although the realisation of that increased risk may not be observable or measured by evidence of collisions.

Conclusions

The introduction of a speed reducing feature is unlikely to materially alter risk levels as observed speeds are very low and any speed hump may not directly reduce speeds of small vehicles. The consequence of any collision will be low due to continuing low speeds.

Designer Response:

The Independent auditor regards the current situation regarding speed as low risk and the proposed scheme to be low risk too. Notwithstanding this the scheme will reduce speeds further through mitigation measures.

2.3 The safety of pedestrians within the shared surface area of Little East Street

Existing Layout

- Likelihood of conflict – Very Low (very low pedestrian movement and low traffic volumes) – Score 1
- Consequence of conflict – Very Low (very low speed of vehicles) – Score 1
- Risk Score – 1 – Very Low

Proposed Layout

- Likelihood of conflict –Low (very low pedestrian movement and slightly increased traffic volumes associated with the removal of restrictions) - Score 2
- Consequence of conflict – Very Low (very low speed of vehicles) - Score 1
- Risk Score – 2 – Low

There is a slightly increased risk associated with the project, although the realisation of that increased risk may not be observable or measured by evidence of collisions. 4

Conclusions

The introduction of a speed reducing feature is unlikely to materially alter risk levels as observed speeds are very low and any speed hump may not directly reduce speeds of small vehicles. The consequence of any collision will be low due to continuing low speeds.

Designer Response:

In the 5 years to March 2012 there were no accidents in Little East Street.

Pedestrian safety in the area is primarily achieved through low speeds and good intervisibility. The proposal will not affect either of these factors and as such the safety risk will remain low.

Pedestrians currently dominate the space in Little East Street, creating a safe environment in which drivers have a heightened awareness of pedestrians. In the proposed scheme the 'pedestrian zone' restriction will be removed and there will be an increase in vehicle flow, however the dominance of the space by pedestrians will continue due to the nature of the road and the slow speeds of vehicles. This situation currently occurs in other roads in the Old Town with similar levels of traffic flow to those forecast.

2.4 The safety of pedestrians emerging into Little East Street from frontages and the car park footpath

Existing Layout

- Likelihood of conflict – Very Low (very low pedestrian movement and low traffic volumes) – Score 1
- Consequence of conflict – Very Low (very low speed of vehicles) – Score 1
- Risk Score – 1 – Very Low

Proposed Layout

- Likelihood of conflict – Low (very low pedestrian movement and slightly increased traffic volumes associated with the removal of restrictions) - Score 2
- Consequence of conflict – Very Low (very low speed of vehicles) - Score 1
- Risk Score – 2 – Low

There is a slightly increased risk associated with the project, although the realisation of that increased risk may not be observable or measured by evidence of collisions.

Conclusions

The introduction of the guardrail feature is unlikely to materially alter risk levels as observed speeds are very low and pedestrians have a notional footway area delineated by colour contrasted surface and the guardrail is unlikely to materially alter pedestrian behaviour at this location. The consequence of any collision will be low due to continuing low speeds.

Designer Response:

Analysis of speeds and visibility lines at exit points has shown that the existing risk of conflict is low.

At the exit point of Dr Brighton's pedestrians / wheelchair users exit on to the footway before crossing the drainage channel on to the carriageway. This situation is similar to many points in the surrounding area and the low speeds and visibility distance mean this is not a safety risk for able-bodied or disabled users. The proposed scheme will result in an increase in vehicles, however this is still assessed as a low risk.

In addition to the existing situation speeds will be lowered by the speed cushion and additional carriageway width will be provided by moving bollards on the opposite side of the carriageway to Dr Brighton's.

The pedestrian exit to the car park is not assessed in its current situation as a safety risk due to low vehicle speeds and visibility distances. In the proposed scheme guard railing will be installed to deflect pedestrians and increase safety.

The independent auditor felt that safety would be low risk with or without the safety railing, however local businesses have indicated during consultation they would prefer the railing to be installed.

Recommendations

In terms of increased risk for vulnerable users it is recommended that the relocation of street furniture that is likely to be necessary should guide more vulnerable users away from potential conflict with vehicular traffic, whilst retaining suitable areas for large vehicles to manoeuvre. In conjunction with street furniture redesign it is considered appropriate to review the need for improved delineation (by contrast colour / texture) between nominal footway and carriageway areas whilst a similar approach would be appropriate for the drainage channel. It is recommended that local disability groups are consulted on these issues.

Designer Response: Agreed that street furniture should be relocated to aid pedestrian movement. This will be done near to the car park exit and at the southern end of the street. The design has been assessed through swept path analysis and shows that traffic can pass a stationary dray lorry without encroaching onto the footway.

Delineation between the footway and carriageway areas is currently very good. Consultation with local disability groups has occurred and will be on-going throughout development.