

Bedser Bridge Toucan Crossing, Woking

Technical Note June 2017

Introduction

There are a number of issues regarding the proposed Bedser Bridge Crossing. At present there is a staggered Toucan Crossing which links the Brewery Road Car Park and the town centre near the Woking Borough Council Offices.

Surrey County Council (SCC) Officers have made the following comments on the proposal to change the layout of the Toucan crossing in order to provide a straight across arrangement.

SCC Comments

SCC Local Area Highways Manager

Would not support any proposal for a single stage crossing, and would very strongly support leaving the existing crossing as it is. There is no need to modify the operation as it works perfectly well at present.

SCC Safety Engineering Team Leader

The following comments regarding the proposed toucan crossing are extracted from the Stage 2 Road Safety Audit.as part of the design process:

Controlled crossing across A320 adjacent to Light Box Summary:

Risk of pedestrian / cycle confusion and conflict. The existing staggered controlled crossing, which operates as two separate crossings is proposed to be replaced with two separate controlled crossings which are aligned with each other. There is concern that pedestrians and cyclists will believe that the controlled crossing is a 'straight across' facility and attempt to cross both west and eastbound A320 carriageways in one movement. Conflict with A320 traffic is likely to result. NB. The proposed crossing will have no audible indicators.

The existing staggered controlled crossing, which operates as two separate crossings is proposed to be replaced with two separate controlled crossings which are aligned with each other. On occasions, due to the observed heavy pedestrian / cyclist demand, both crossings will show a red signal for traffic / green signal for pedestrians and cyclists, which will allow pedestrians and cyclists to cross both A320 westbound and eastbound carriageways in one movement. There is concern that pedestrians and cyclists may expect to cross both sides of the crossing on every occasion and hence may attempt to cross both sides of the A320 carriageway regardless of the status of the pedestrian / cycle aspect. Conflict with A320 traffic is likely to result on occasions when only one crossing displays a green man / green cycle aspect.

Pedestrians / cyclists from the southern side of the A320 controlled crossing facility will cross the westbound carriageway when traffic stops and a green man / cycle aspect is shown. However, northbound pedestrians and cyclists may view southbound pedestrians / cyclists

crossing the adjacent crossing across the eastbound A320 (which operates independently) at the same time. Northbound pedestrians / cyclists may therefore assume that they are able to cross both carriageways in one movement, without realising that the eastbound A320 traffic is about to proceed / the status of the controlled crossing has changed to a red man / red cycle aspect. Northbound pedestrians / cyclists entering the eastbound A320 carriageway (to reach the northern footway) are at risk of conflict with eastbound traffic, especially with eastbound traffic travelling within the nearside lane (as vehicles in the nearside lane may have received a green signal for several seconds by the time pedestrians / cyclists occupy the nearside lane). This is of concern due to the potential speed of eastbound vehicles within the existing 40mph speed limit, as well as the fact that traffic in the offside lane may mask pedestrians / cyclists attempting to cross the carriageway. NB. This situation remains a concern for southbound pedestrians / cyclists crossing the carriageway in the opposite direction to reach the southern footway.

RECOMMENDATION

Retain existing staggered crossing facility.

Provide a speed limit reduction to 30mph extending from Church Street West to Chobham Road to the east (possibly to Chertsey Road).

SCC Senior Transport Planner

Following comments based on information provided by Vectos, the Transport Consultant:

An audit of the modelling provided by Vectos has been completed. The modelling represents the various scenarios to the satisfaction of SCC.

The options are as follows:

Scenario T37b - layout as existing staggered crossing. No activations of the crossing in the AM and PM as ped flow surveys showed minimal flow. Saturday included ped activity.

Scenario T51 - layout shows a straight crossing running as two separate stages. The crossings are called every cycle in all time periods.

Scenario T52 - layout shows a straight crossing running in one stage. The crossings are called every cycle in all time periods.

In terms of degrees of saturation, in all scenarios the maximum degree of saturation on the approach to the crossing is 64% (under the 90% 'threshold'). Vectos have stated that the queue will not block back to the Peacocks junction and summing the queue lengths together confirms this.

When comparing the results for T51 and T52, there is an increase in the degree of saturation and queue lengths with the straight single stage crossing in T52 as opposed to the straight two stage crossing in T51, but the degrees of saturation are well below the level at which SCC would be concerned.

In summary, the modelling shows more delay in the T51 straight across in one stage scenario, but this is not at a level which would cause too much concern. If the

crossing were to be called more frequently than once per cycle, the impact on traffic would be greater.

SCC Local Services Group Manager

Would not support a straight across crossing due to concerns regarding possible increased congestion along Victoria Way.

SCC Traffic Systems Team

Had the following comments:

We do not support modifying the crossing to a facility where all the vehicular approaches are stopped whilst pedestrians/cyclists are signalled across the A320. The existing staggered arrangement works very well.

From a technical point of view, LTN 2/95 says to consider staggered crossings if the carriageway is wider than 11m and not to use a single direct crossing if the carriageway is wider than 15m. A single direct crossing will require a significant period of time in order to ensure that pedestrians can cross the A320 safely (5 traffic lanes and the central reserve). The requirements and priorities of the frail and elderly are significantly different from those of young adults or children. The single direct crossing will result in lengthy pedestrian greens and intergreens. It is likely that the pedestrian stage will only be able to be called once every signal cycle because traffic demand is high. This will mean that pedestrians are faced with significant delay waiting for a green man/cycle signal and that there may be a wider window of opportunity for pedestrians to cross the carriageway if a more traditional staggered form of crossing was provided.

Furthermore, a long cycle time can be significant in off-peak periods when it would be advantageous to operate a short cycle time but the presence of the long crossing hinders the flexibility of the cycle time of the junction.

I wish to add that we do not support modifying the existing crossing to a 2-stream crossing with no stagger facility. We agree with the comments submitted by the Road Safety team. In addition, where far-side pedestrian/cycle signals are provided, confusion can be caused if the pedestrian signal can be seen simultaneously. A waiting pedestrian/cyclist will likely "see through" a red signal to a green signal at the opposite crossing. Careful alignment and louvres to limit the field of view will be required and they are not always effective because the louvre does not always have the flexibility and wide range of adjustment. Furthermore, the storage area within the central reserve has been reduced in size which may increase overcrowding within the central reserve due to insufficient space if there are large numbers of cyclists, disabled pedestrians in wheelchairs, pedestrians with small children and pushchairs, etc. The size of the waiting area needs to be carefully considered.

In conclusion we do not support the modifying the crossing to one without a staggered pedestrian facility.

Options

1. Do nothing; Or rather retain existing toucan crossing as it currently operates
2. Provide straight across layout with two stage phasing
3. Provide straight across layout with one phase straight across movements

Conclusions

On balance it is considered that the changes to the crossing will not be beneficial to pedestrian movements or safety.