

## Annex E

### Option 2: Reinstating a Left Turn Lane with a Central Cycle Feeder Lane (to include road widening by removing cobbles)

1. **General Description:** This layout (see **Annex C**) is based on removing the existing strip of cobbles running alongside the footway, plus severely trimming back the boundary hedge to the adjacent properties, to create additional road space for a central cycle 'feeder' lane to be accommodated between separate left and right turn traffic lanes. It also retains the existing splitter island.
2. **Advantages:**
  - A continuous facility would be retained for cyclists all the way from the cycle track to the ASL.
  - Calculations show that the short left turn lane would improve the traffic flow capacity of the junction, and would be especially advantageous in the morning peak period when there is a higher proportion of drivers making the left turn. On average, 2 vehicles would be able to make use of the filter lane, and a further 2 vehicles during the full green. This would restore approximately 40% of the capacity of the original filter lane.
  - Retaining the cycle track build-out would protect cyclists from traffic at the pinch-point, which was a particular problem for cyclists in the original layout (shown in **Annex A**).
  - Because there would be no work required to remove the cycle track build-out, the risk of any damage to the existing water main (which was fractured during the construction of the current scheme and resulted in significant local flooding) would be significantly reduced.
  - Retaining the splitter island would provide a benefit to pedestrians crossing the Water End junction mouth for accessing Clifton Green (where there is a gap in the boundary fencing). The splitter island also provides protection for cyclists waiting in the ASL box from vehicles turning right into Water End from Shipton Road.
3. **Disadvantages:**
  - Both the left turn and right turn traffic lanes approaching the junction would be very sub-standard in width, and therefore cyclists are still likely to experience significant difficulties reaching the ASL, despite the provision of a continuous central cycle feeder lane. The main risk to cyclists is the potential for conflict with motor vehicles at the point where vehicles will have to cut across the cycle lane to enter the left turn filter lane. In addition, because of the narrow traffic lanes, there will be occasions when vehicles queuing or moving directly adjacent to the cycle lane may need to

encroach into the cycle lane, thereby creating further potential conflict with cyclists.

- The short length of the left turn lane means that entry would quickly become blocked by vehicles queuing back in the main traffic lane. When the left filter signal comes on, the vehicles in the left turn lane (two on average) will clear in around 6 to 8 seconds, but there will be other drivers in the main traffic queue wanting to turn left who will see the left filter signal showing, but will be unable to progress forward to use it. This is likely to lead to some frustration and negative reaction to the layout.
  - Although this layout would restore around 40% of the capacity of the original left turn traffic lane, it would require an additional 10 to 15 seconds of extra full green time to be allocated to the Water End approach to fully restore the lost capacity. Whilst indications are that some spare green time is available in off-peak periods, it is not available during the peaks without causing severe adverse effect on other legs of the junction.
4. **Estimated Costs:** This option would involve removing the cobbles to create additional carriageway width, which would not only involve the provision of a full carriageway construction in the area concerned, but would also require an area of carriageway re-profiling to smooth out the road camber. A new kerb alignment associated with these changes would also be required. In total, the implementation costs are estimated to be approximately £30k to £35k.