# A56 Chester Road Cycle lane options

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# Background

Sustrans have been contacted by the Weaver and Sandstone Cycle Forum (WaSSCF) based in Frodsham. The cycle forum are looking at options for the existing cycle lanes on both sides of the A56 between Helsby and Frodsham in Cheshire. The route is just over a mile long and links the two towns, with Helsby High School located on the road towards Helsby. Sustrans' NCN Route 5 runs along a section of the A56 at the Frodsham end and two local routes connect Chester Road with other sections of NCN 5

The concern of WaSSCF is that the cycle lanes are under-used as they are too narrow for the speed and amount of traffic on the road. As a consequence they are not used by cyclists for the relatively short journeys between Helsby and Frodsham and are not used for journeys to Helsby High School. WaSSCF would ideally like to see physically segregated cycle lanes which provide cyclists with both perceived, and actual, safety from other vehicle traffic on the road.

Sustrans have been asked to suggest options which might help improve the situation and to give guidance as to best practice in similar situations.

# Analysis and preferred options

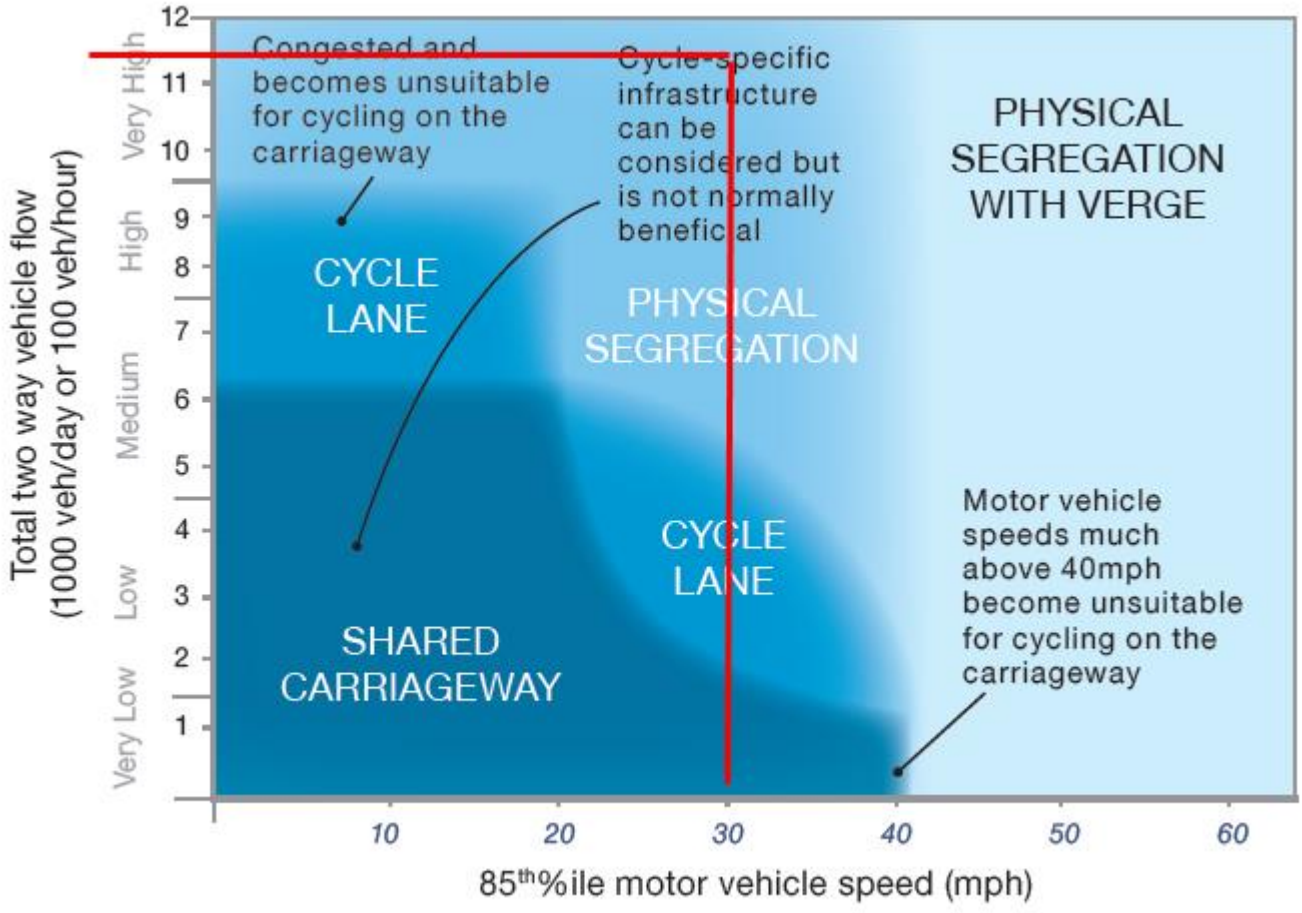
Traffic flows on this road were taken from the DfT website which showed 11,283 AADF (annual average daily flow). The speed limit is 40mph by Helsby High School and 50mph on the other stretches until the road enters the 30mph zone in the towns.

http://www.dft.gov.uk/traffic-counts/cp.php?la=West+Cheshire#46577

Putting this information on to the speed/flow chart in the Sustrans Handbook (see diagram below) shows that physical segregation is the preferred solution. Where the speed limit remains at 50mph the Sustrans guidance is that any cycle lane should be separated with a verge.

The options for physical segregation include: armadillos on each side of the road, an off-road cycle lane on the Helsby High School side of the road or kerbed cycle lanes on each side of the road.

An off-road cycle lane has been constructed on the A56 further to the east in Warrington and this offers an example of how cycling provision could be improved on the Chester Road section. The advantage of this option is that it provides a completely segregated path and removes the requirement for crossing provision outside the school. However, the path would need to be two-way and shared use within a fairly limited amount of verge space.



# Alternative options

Given that funding for physical segregation may not be available the following table shows various other options for the cross section of the road, assuming an overall road width of 11.0 metres.

| Layout | Westbound width (m) | | | Eastbound width (m) | | | Total width (m) |
|---|---|---|---|---|---|---|---|
| | Cycle lane | Separation | Lane | Lane | Separation | Cycle lane | |
| Existing layout | 1.5 | | 4.0 | 4.0 | | 1.5 | 11.0 |
| Wide cycle lanes | 2.0 | | 3.5 | 3.5 | | 2.0 | 11.0 |
| Separation margin | 1.5 | 0.8 | 3.2 | 3.2 | 0.8 | 1.5 | 11.0 |
| Separation margin and no centre line | 2.0 | 0.8 | 5.4 | | 0.8 | 2.0 | 10.9 |
| Light segregation (eg armadillos) | 1.7 | 0.3 | 3.5 | 3.5 | 0.3 | 1.7 | 11.0 |
| Stepped (hybrid) cycle track | 2.0 | | 3.5 | 3.5 | | 2.0 | 11.0 |
| Full kerbed segregation | 1.8 | 0.5 | 3.3 | 3.3 | 0.5 | 1.8 | 11.0 |

The accompanying sketch (Chester Road Cycle Lane options) illustrates the two separation margin options. Guidance on centre line removal is covered in Section 5.11 of Cardiff City Council's cycle design guide:
http://www.keepingcardiffmoving.co.uk/uploads/documents/37/original/Design_Guide_FINAL.pdf?1319638020

This suggests that the lane width shouldn't be any wider than 5.5 metres. The advantage of removing the centre line is that it can contribute to slower vehicle speeds. TfL has carried out some research which demonstrates speed reductions associated with centre line removal (http://content.tfl.gov.uk/centre-line-removal-trial.pdf).

If a scheme is implemented using just road markings, consideration should be given to other localised speed reduction measures, particularly in the vicinity of the school. This could range from the creation of a gateway feature with different coloured surfacing on the road to kerb line changes to create road narrowings (with appropriate cycle lane bypasses), depending on the budget available.