

8.0**Cyclists and Roundabouts****8.1****Why are Roundabouts a Problem for Cyclists?**

Roundabouts, and in particular, large roundabouts can be a feared feature of the road network for cyclists. Some cyclists may change their route, or even divert to another mode of travel because of their desire to avoid travelling through roundabouts.

- There is good reason for the cyclists' fear as they are generally over represented in accidents at roundabouts. Between 1999-2001 7% of all cycle accidents in the County occurred at roundabouts.
- Roundabouts with flared entries and large roundabouts that allow high speeds are particularly hazardous.
- The greater the number of arms, then the greater the problem.
- The majority of accidents (50%) involving cyclists on roundabouts occur when a cyclist on the roundabout is struck by a vehicle entering the roundabout (TRL Report 285). There appears to be some failure or inability of drivers to see circulating cyclists.
- Another common type of accident for cyclists using roundabouts is when a cyclist, crossing one of the exits from the roundabout and continuing around the roundabout, is hit by a motor vehicle exiting the roundabout.

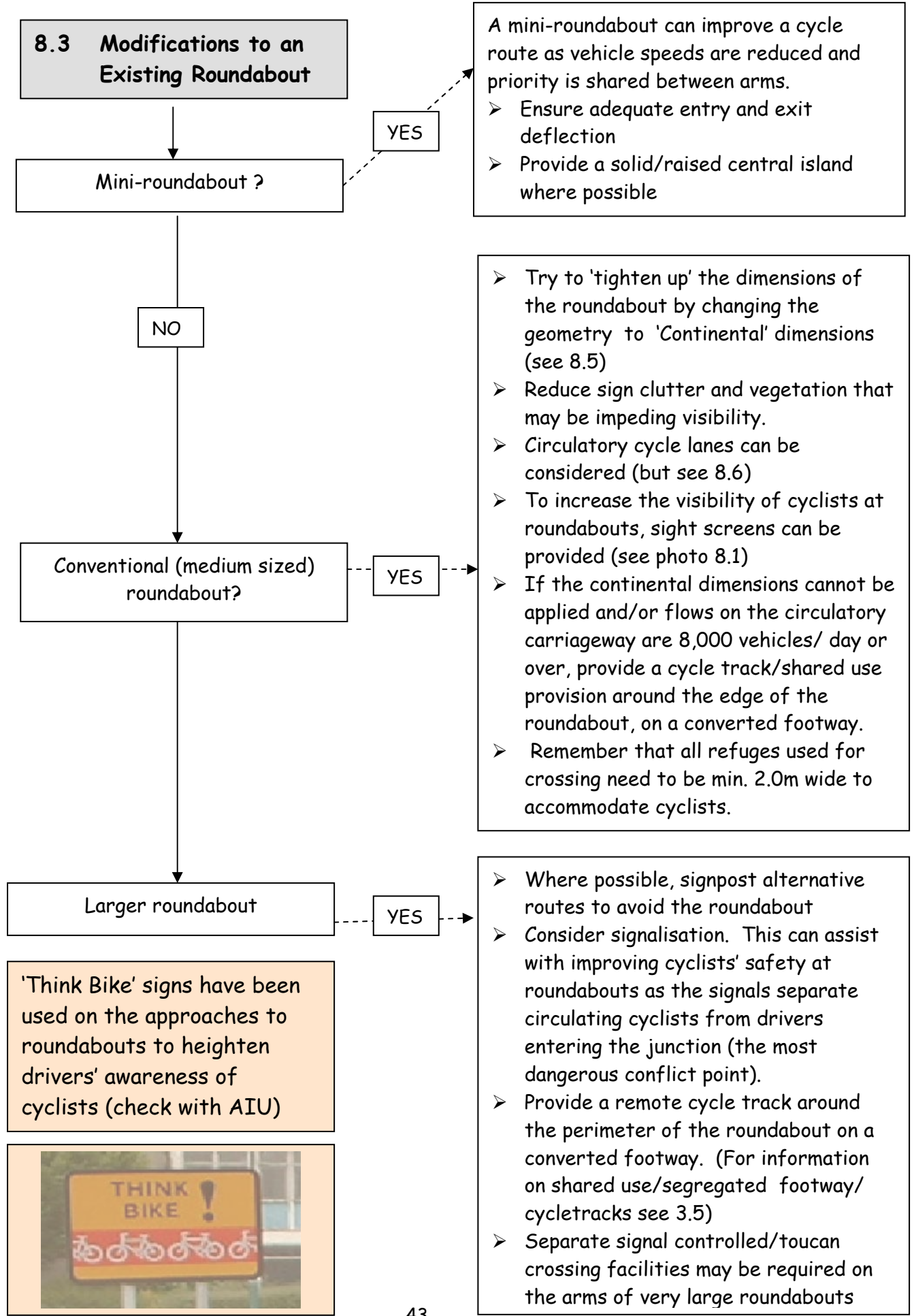
There are however a number of measures that can be taken to make both existing and proposed roundabouts safer for cyclists

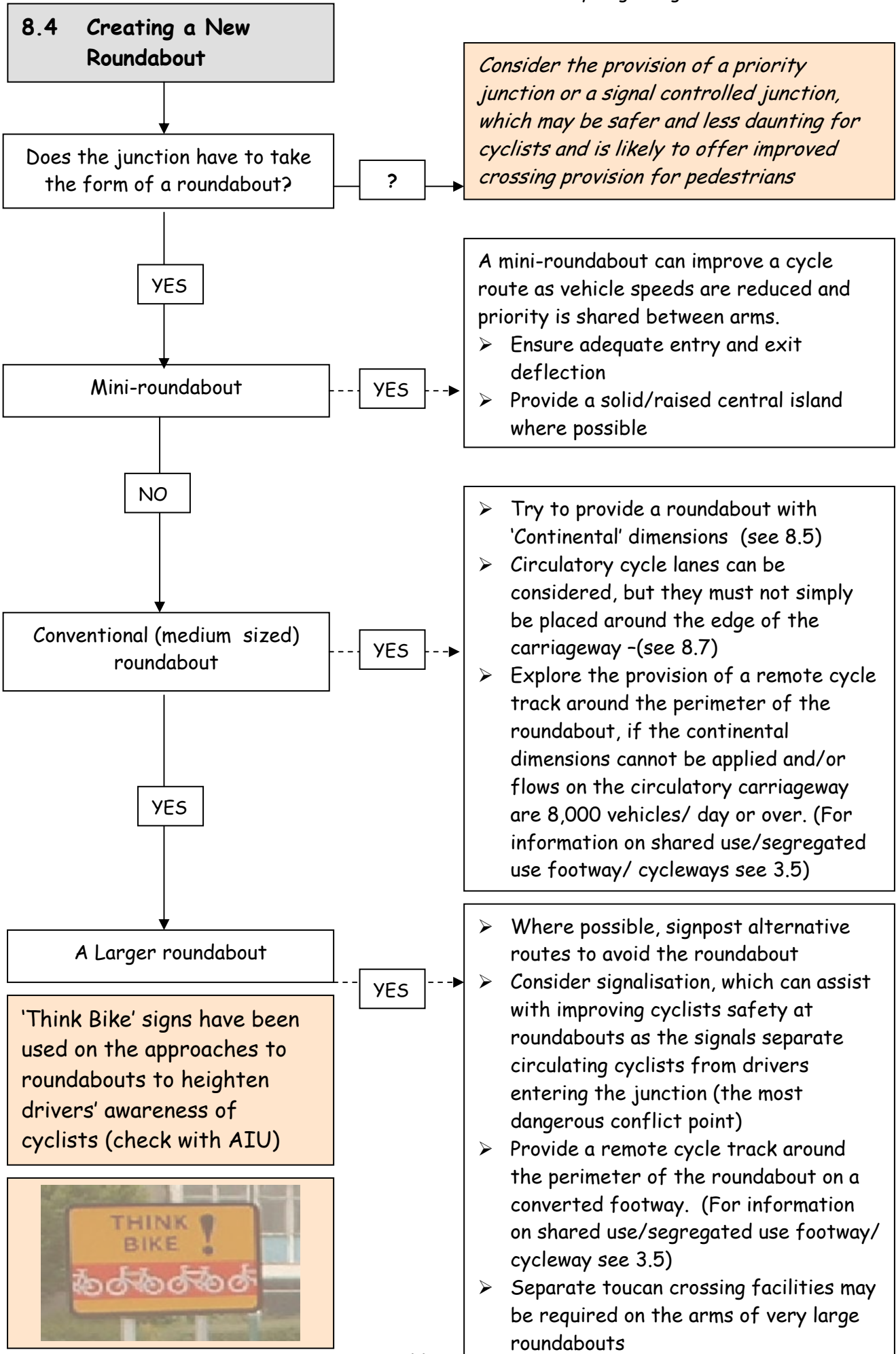
8.2 Good Roundabout Design Features:

- reducing the width of the circulatory carriageway
- increasing the deflection on entry, and limit the number of arms
- reduce entry speeds of traffic
- provide signing to raise drivers awareness of cyclists
- providing alternative routes to avoid the roundabout if required

**Photo 8.1**

Sight screens/ flicker boards can help drivers entering a roundabout to see circulating cyclists. There is insufficient evidence as yet regarding their effectiveness





8.5

'Continental' Style Roundabouts



Photo 8.2

Example of a 'continental style' roundabout
Victoria Embankment/ Riverside Way, Nottingham



Photo 8.3

Example of a 'continental style' roundabout
Ranson Road/ Swiney Way, Chilwell.

- TAL 9/97 Cyclists at Roundabouts - Continental Design Geometry
http://www.roads.dft.gov.uk/roadnetwork/dit/m/tal/cycle/09_97/
- IHT Cycle-Friendly Infrastructure (1996)
- LCN Design Manual (1998)

8.5.1 General Design

- These are essentially a 'tightened up' roundabout (see photos 8.2 & 8.3)
- The design specifications differ from TD16/93: Geometric Design of Roundabouts

8.5.2 Design Considerations

- Arms that are radial/perpendicular to the roundabout centre (rather than tangential)
- A circulatory carriageway width of between 5m and 7m
- An external (inscribed circle)
- diameter of between 25m and 35m.
- Over-run areas in the centre of the roundabout (sloped if possible), to accommodate larger vehicles
- Single lane entry and exits
- Minimal flare on entry
- Substantial deflections

8.6 Should Cycle Lanes Be Added to a Roundabout?

Coloured circulatory cycle lanes are an attempt to make drivers more aware of the presence of cyclists and therefore reduce the number and severity of collisions

- A study of 210 roundabouts in the Netherlands by Schoon and Van Minnen, 1994 found that roundabouts with a circulatory cycle lane were not safer for cyclists (TRL Report 285)
- It is suggested by some that circulatory cycle lanes actually place cyclists directly into the area of the roundabout where they are most at threat from vehicles either entering or leaving the roundabout
- Therefore, care needs to be applied when circulatory cycle lanes are considered

8.6.1 Case Study: The Magic Roundabout, York

- York City Council has attempted to overcome the concerns by placing the 'innovative' cycle lanes nearer to the centre of the roundabout. This places cyclists more directly in the sight line of drivers (see photos 8.4 and 8.5)
- In addition, on the approach to each exit, the lanes split into two so that it is clearer whether cyclists are turning off or continuing around the roundabout"
- The roundabout also features a geometry which encourages low vehicle speeds - the so called 'continental design'
- This effect is further enhanced by the cycle lanes which make the roundabout look smaller. Average entry speeds have been brought down to 17mph, compared with 31mph before"

Extracts from York City Council website)

The main focus should be on providing continental dimensions



Photo 7.4 Cycle lanes at a roundabout.
Extract York CC website



Photo 7.5 Cycle lanes at a roundabout.
Courtesy CTC