Dangerous and inaccessible barriers appeared near the Biomedical Campus on the busway path, earlier in January 2020. (blog post)

Excerpts from relevant design and policy documents:

London Cycle Design Standards Section 1.1

> *'Unnecessary small obstacles and diversions should be removed. Chicanes and cyclist dismount signs must be avoided.'*

London Cycle Design Standards Section 4.5.16

> *'Where cyclists need to be encouraged to slow, it is better to give the required messages through design rather than physical calming features or additional signing.'*

'Barriers or chicanes are not recommended as speed control measures.'

'Barriers and chicanes may [...] also cause congestion on the route, which may lead to further conflict.'

Design Manual for Roads and Bridges, CD 195 Paragraphs E/3.32-36

'Cycle tracks shall be clear of street furniture and obstructions with the exception of features to prevent motor traffic access.'

'Bollards on cycle tracks shall be aligned in such a way that enables a cycle design vehicle to approach and pass through the bollards in a straight alignment.'

The Wheels for Wellbeing Guide to Inclusive Cycling

'Many cyclists cannot dismount and push/wheel their cycle. Sections of the road network that are not continuous, or that require the cyclist to make awkward manoeuvres or dismount, pose a significant barrier for disabled cyclists. This is particularly so for handcyclists, where it is not an option for the rider to get off and walk at a barrier or hazard and also applies to many people who use a cycle as a mobility aid. It is wrongly assumed that a cyclist can always lift their cycle over a barrier. Access control measures and barriers that prevent access to motorbikes, mopeds and scooters also prevent access to inclusive cycles (e.g. A-frames, K-frames, York Chicanes and kissing gates).'

Cambridge Local Plan Policy 80

'[Sustainable access will be achieved by] supporting public transport, walking and cycling to, from and within a development by:

1. giving priority to these modes where there is conflict with cars;

2. conveniently linking the development with the surrounding walking, cycling and public transport networks;

3. prioritising networks of public transport, pedestrian and cycle movement so these are the best and safest means of moving around Cambridge. Areas where public transport, pedestrian and cycle movement is difficult or

dangerous will be improved and, where possible, have further capacity for these sustainable modes provided

4. ensuring accessibility for those with impaired mobility;'

Notes

Any obstruction on a cycle route can potentially become a dangerous hazard: someone will eventually hit the obstruction, it is just a matter of when and the severity of the injuries. One of the worst cases occurred in 2010 when chicanes were implicated in the death of 12-year-old Aidan O'Neill in Poole (https://www.bbc.co.uk/news/uk-england-dorset-11446858). More locally, we observe evidence of repeated collisions with nearby chicanes on the Coton Path and the Ridgeway. For the past several years I have noted that the chicanes on the Coton Path were being hit and then fixed, over and over again. In the past year, the repair works have ceased, and the chicane there is now being eroded by the force of repeated collisions.

The Coton Path / Adams Road chicane: observe (1) the handcyclist is unable to follow the sharp curvature of the path and is forced to cut over to the other side; (2) the brick wall has been damaged by the force of many collisions over the past year, and is deteriorating. Thankfully, this dangerous chicane is scheduled for removal by 2021, as part of the West Cambridge master plan.

One of the Ridgeway chicane barriers: this has been rebuilt at least twice and is currently broken again, from (an) apparent collision(s). This chicane was inserted into the Eddington planning application at the last moment, and was strongly objected to at the time by the walking and cycling officer at the city council. Since Ridgeway opening, some of the older local residents have reported difficulties navigating this chicane when carrying shopping back from Sainsbury's on their bikes. Another chicane on the Ridgeway is broken in a similar way due to a separate collision.

As the London Cycle Design Standards note, chicanes are not appropriate 'speed reducing' measures. Instead, design should be used, just like with any other junction on the highway network. There are thousands of junctions in Cambridge, and the Clerk Maxwell Road junction should be given the standard junction treatment just like any other. That means priority-markings as needed, and proper visibility splays. I also note that the opposite street, The Lawns, also lacks priority-markings and should have a give-way line where it joins Clerk Maxwell Road. If the path under discussion also permitted cars, then the chicanes would never have been installed in the first place, because they would be obviously inappropriate, and instead a standard junction design would have been used.

The University also has a duty under the Equality Act 2010 to ensure that people with protected characteristics are not discriminated against by University decisions. As the Guide to Inclusive Cycling notes, sections of path that require awkward manoeuvres pose a significant barrier to people with disabilities who cycle. There are many types of cycles, such as the aforementioned handcycles, and also cargo cycles, tricycles, recumbent cycles, cycles with trailers, and numerous types of cycle adapted for various disabilities. CD 195 requires cycle infrastructure to be designed with the 'cycle design vehicle' in mind, which is considered to be a cycle with a trailer.

The chicanes are clearly not suitable for the cycle design vehicle, and those are the most likely to collide with the chicanes at these locations.

The chicanes also discriminate against slow or less agile cyclists, who are more unsteady, and less able to navigate tight turns, especially when travelling up a slope. They are more likely to fall against the metal railings when forced into such tight quarters, especially when the path gets busy with people walking and cycling in both directions. This is not right. The University should be building infrastructure that enables and encourages everybody to cycle who wants to cycle, is safe and convenient to use, and reduces conflict between people walking and cycling, in accordance with the Cambridge Local Plan.

In summary the use of chicanes on cycling routes on the University estate poses a health and safety threat, creates unnecessary conflict between people walking and cycling, and is exclusionary to people with protected characteristics under the Equality Act 2010, as well as people who are simply less agile on a bike. The right way to design a junction where a cycling path joins a road is to provide the same as with any other ordinary junction on the road network: visibility splays plus priority markings where needed. On a path where car access is to be limited, in order to reduce the risk of injury as much as possible, use well-spaced (1.5m gaps), rounded profile and rubberised bollards painted with contrasting colours to the surroundings.