**THE BICYCLE INSTITUTE OF SOUTH AUSTRALIA**
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***Cycling for the Environment, for Health, for Pleasure***

26 May 2015

Mike Blythe
Project Manager
City of Charles Sturt

Dear Mr Blythe,

**Bartley Terrace Streetscape Project**

We realize that the time for submissions on this plan has closed but hope that you will consider our comments.

The Bicycle Institute welcomes your objectives of reducing driver speeding and improving cyclist and pedestrian safety. We think that the plans as presented will go some way to achieving these. As with any cycling design, it is the quality of service and connectivity that these designs provide that will determine their ultimate usage rates.

We would like to suggest several measures that would achieve these objectives more effectively.

1. Install 1.8m bike lanes on road rather than the proposed 1.5m lanes. This is particularly important adjacent to 2.1m (minimum width) parallel parking, where the 1.5m lanes actually comprise a 0.4m safety buffer to car doors and 1.1m lane. (This is illustrated better in the superseded Austroads' Guide to Engineering Practice Part 14 than in the summary Austroads' AP-G88-14, though the overall widths are the same); and further observing that the water table is included in this bicycle lane width. (Both GTEP P14 and AP-G88 note that this is area cannot always be considered trafficable to cyclists). We would like to see the buffer to these parked cars marked, to encourage cyclists to travel away from this dangerous zone.
   We would also like to see enhanced separation between the bicycle lanes and traffic lanes using measures such as audio tactile line marking, wider line marking or other devices. (While there has been some negative feedback regarding the use of raised retro-reflective pavement markers, this is where they have been poorly located. The City of Melbourne has had good success with similar devices. The figure shown below is a good guide for bicycle lane design.) If no such enhancement is provided, there is the potential for cars to drive in the bicycle lanes. The 'gold standard' would be to have the bicycle lane as kerb separated from the road, e.g. by installing it at an intermediate height (50mm), but recognize the limitations of doing so.
2. Reduce the width of the travelling lanes from 3.3m to 3.0m, as an effective measure in reducing vehicle speed and releasing sufficient space for the above measure. We realize that Bartley Terrace is a local bus route, but note that much busier bus routes in the City will have 3.0m lanes at times, and 3.0m is reasonable adjacent to wider bicycle lanes. (Busy Pirie Street has been redesigned to have 2.7m lanes in order to accommodate reasonable bike lane widths.)
3. Do not mark the 2.0m footpaths as "shared use". While we support footpaths above the minimum width for the comfort of pedestrians, your graphic itself indicates that 2.0m is too narrow for a shared use path and would create conflict between pedestrians and cyclists – including by encouraging two-way cyclist travel, which has the potential to significantly increase conflict at driveways and side streets.
   Our preference and the 'gold standard' would be to have a separated bike path that is off road, with smooth lead-off and lead-on ramps. This of course would be more expensive, but we note that the concept plan is not costed and is for long term implementation, and this would remove

some conflict around Bartley Tavern area. In the interim, expense could be lowered by reducing the footpath width to 1.8m, with the one-way bike path being 2.0m as per the guide below, reproduced from the Ireland's National Cycle Manual . This would be below desirable widths but within the acceptable range for both footpath with separated bicycle path under Australian guidance (AP-G88-14).

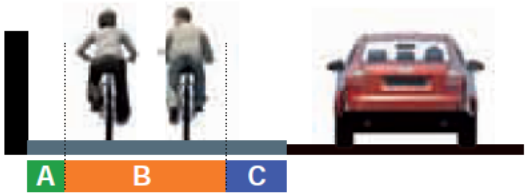
4. Where cyclists might access pedestrian refuges to cross, we suggest installing small turning bays to allow cyclists to stop and turn out of the flow of traffic.
5. Under AS 2890.5, 5.4m for angle parking is for the situation where cars cannot overhang a kerb and in your design, this appears to be enforced by bollards. We suggest that wheelstops would also achieve this result and tend to impinge less on pedestrian amenity.
6. Connections into the adjoining pedestrian network are not (well) shown. We suggest this project should improve these connections (many of which may well be used by cyclists for connectivity reasons) as well as provide additional crossing locations to allow pedestrians to access bus stops (e.g. at Kiama Avenue). Many of the pedestrian links do not align with the street network and we acknowledge the difficulty of providing crossing points in these mid-block locations, but raise their desirability.

We recognize and commend the desire of the City of Charles Sturt to deliver high quality urban environments. It would be a pity for this opportunity to leave the residents with a streetscape anchored to design considerations of the 20th century rather than the 21st century.

We would be happy to discuss design issues further with you. I may be contacted on 0402 965 929.

Yours sincerely,

Dr Ian Radbone
Chair, Bicycle Institute of South Australia




| A Inside Edge | | B Cycling Regime | | C Outside Edge | | D Additional Features | |
|---|---|---|---|---|---|---|---|
| Kerb | 0.25m | Single File | 0.75m | 30kph, 3.0m wide lane | 0.50m | Uphill | 0.25m |
| | | | | | | Sharp bends | 0.25m |
| Channel Gully | 0.25m | Single File + Overtaking, Partially using next lane | 1.25m | 50kph, 3.0m wide lane | 0.75m | Cyclist stacking, Stopping and starting | 0.50m |
| Wall, Fence or Crash Barrier | 0.65m | Basic Two-Way | 1.75m | Raised kerb, dropped Kerb or physical barrier | 0.50m | Around primary schools, Interchanges, or for larger tourist bikes | 0.25m |
| Poles or Bollards | 0.50m | Single File + Overtaking, Partially using next lane | 2.00m | Kerb to vegetation etc. (ie. cycleway) | 0.25m | Taxi ranks, loading, line of parked cars | 1.00m (min 0.8m) |
| | | 2 Abreast + overtaking (tracks and cycleways) | 2.50m | | | Turning pocket cyclists | 0.50m |