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Cycling for the Environment, for Health, for Pleasure

3 January 2018

The Hon. Chris Picton MP
 Minister for Road Safety

Briefing notes

The Bicycle Institute of SA has been representing the state's utility cyclists for over forty years. BISA is represented today by:

- Ms Fay Patterson BE MAITPM (Chair)
- Dr Ian Radbone (Immediate past Chair)

Our road safety concerns will obviously revolve around what can you do for us, but we'd also like to know what we can do for you. Particular policy concerns we have are:

- Legislated nonfeasance: section 42 of the Civil Liability Act 1936
- Australian Road Rules exemption: parking at street corners
- Contra-flow cycling
- Mandatory helmet legislation
- Bollards
- Speed
- Clearways (support)

These are discussed in more detail following. FYI, Appendix B also has a summary of our "What we'd like to see in a State Bicycle Strategy", prepared some years ago.

1) Legislated nonfeasance

Prior to 2001, Australian road authorities received significant protection from road-related civil liability claims through the 'highway rule', which held that road authorities could only be held liable under misfeasance (i.e. effecting a maintenance action at a location, but doing it negligently) and not for any failure to act (a concept known as nonfeasance).

This provided no incentive for road authorities to act to identify and mitigate emerging risks. A purely reactive approach was perpetuated, and a "I don't want to know" culture. Increasing concern about this situation led to two cases, Brodie and Ghantous, being taken to the High Court. Judgements handed down on 31 May 2001 overturned the 'highway rule'. This development of civil liability and negligence jurisprudence effectively indicated that the 'highway rule' was not in keeping with community interest.

However, this opened a can of worms for road authorities. Many state and territory governments acted to limit the impact on councils. To sum up:

1. New South Wales, followed by a number of other states, introduced a 'special protection' for road authorities – but this does not restore the 'highway rule' and its blanket immunity
2. Victoria temporarily restored the 'highway rule' until the development and introduction of its Road Management Act 2004 (amended on 1 January 2010), which details a number of statutory duties for road authorities in that state
3. South Australia enacted Section 42 of the Civil Liability Act 1936 on 1 April 2004, under which "A road authority is not liable in tort for a failure— (a) to maintain, repair or renew a road; or (b) to take other

action to avoid or reduce the risk of harm that results from a failure to maintain, repair or renew a road.”

South Australia is the only state or territory in Australia to restore the ‘highway rule’ indefinitely.

While the Bicycle Institute appreciates the costs and stresses the overturning of the ‘highway rule’ brought, we are also aware that since the enacting of section 42 of the Civil Liability Act 1936, many if not most councils in South Australia appear to have greatly curtailed asset management activities related to identifying safety hazards. Indeed, we have heard comments from council staff when cyclist safety issues have been raised of “Don’t tell me, I don’t want to know” and “Council can’t be sued for negligence”.

The Bicycle Institute strongly advocates a change of legislation away from the blanket immunity of the ‘highway rule’ towards the NSW or (preferably) Victoria approach, providing protection to road authorities but also encouraging councils to understand and take seriously their duty of care towards road users.

2) Australian Road Rules exemption

On 1 January 2000, new uniform Australian Road Rules (ARRs) came into effect in South Australia. These included a change in stopping distances where vehicles are not permitted to park in various locations such as near intersections, bus stops, crests, curves, railway crossings and children’s crossings.

The previous standard of most states revolving around 6m on the approach/ 9m on the departure, as measured from the building line, was changed to 10m and 20m, measured from the kerb line.

This change was adopted as a safety measure as parked cars obstruct the view of motorists (and others) at critical locations. (Cyclists might add that they force motorists to pull out from side streets and stand over the bike lane so they can see on-coming traffic.)

Due to the work involved in changing signage and line-marking, the state government flagged that it would not immediately enforce compliance with the new ARR. However, the stopping distances relating to intersections have, in many councils, never been changed. Cars are allowed to park closer than 10m, even on busy locations such as Greenhill Road at Unley, and some councils have specifically decided not to comply with ‘new’ ARR distances.

The Bicycle Institute does not believe that road user safety should be compromised for the sake of a few metres of on-street parking.

Councils should be told that they’ve had long enough to adjust and be given a finite date – we suggest 1 January 2019 – in which to comply with the regulations, after which DPTI starts fining councils whose parking is in contravention with this rule.

Here, NSW provides a good template. In 2009, the (then) NSW RTA advised councils that from 1 January 2010 they would expect compliance with the 10m requirement. When councils protested at the hardship of adjusting parking restrictions throughout the council area, the RTA pointed out that they’d had 10 years in which to do so. Surely 18 years is long enough for South Australian councils!

3) Contra-flow cycling

Research commissioned by Adelaide City Council has revealed that allowing cyclists to travel the wrong way down local one-way streets improves safety by allowing cyclists to use routes that would not otherwise be available to them, and which are alternatives to major roads. For example, around Central Market, the alternative to using a street with less than 1,000 vehicles/day travelling at low speed might be to use King William Street, with exposure to heavy vehicles, buses and trams, parking and unparking manoeuvres and higher traffic speeds.

As with overseas jurisdictions, clear-cut evidence has not led to significant change. Although few crashes occur at intersections and separate facilities at this point do not improve safety, despite which ACC continues to construct such facilities, limiting contra-flow cycling to the roll-out of designated routes. In other councils, the situation is typically less progressive.

The Bicycle Institute would like to see the same approach adopted in South Australia as in jurisdictions such as Belgium, which is to reverse traffic engineering practice to match safety evidence: contra-flow cycling

must be allowed in one-way streets with traffic volumes less than a few thousand vehicles a day in all council areas, except where councils identify site-specific conditions that point to unsafe conditions. A council's case against allowing contra-flow in the specific situation would then need to be agreed to by DPTI if it is proposed to ban contra-flow cycling at a particular site.

4) Mandatory helmet legislation (MHL)

The Bicycle Institute's position on MHL has been that it is a divisive issue and we have other priorities. However, we have recently changed this in the light of research findings. We now support a trial of the Northern Territory's approach to MHL, namely excluding off-road paths. We believe that such a move would essentially bring MHL into line with seat-belt legislation and that the benefits of this approach would outweigh the costs. (A precis of our reasoning is attached as an appendix).

Currently, seat-belt legislation applies on public roads (and road-related areas) but not on private roads, driveways or car-parks where low speeds and low traffic volumes translate to conditions where seat-belts would not save many lives and are considered an inconvenience by some people.

MHL also applies to these situations but one way that local and state governments encourage cycling is to construct paths away from high-speed, high-volume car traffic. These locations are also used by pedestrians so in order to regulate the interactions between the two, such paths are classified as road-related areas. Since all Road Rules apply to road-related areas, cyclists must wear helmets where car drivers in similar types of conditions do not have to wear seat-belts.

We note that the Northern Territory's approach to MHL excludes off-road paths, has not resulted in higher injury rates than elsewhere in Australia and is associated with the highest cycling rates in the country.

5) Bollards

The Bicycle Institute has an ongoing issue with council administrations that are ignorant, hostile or unresponsive to safety hazards affecting cyclists. Bollards are a good example. The Bicycle Institute has been pursuing this as a safety issue for more than 20 years, yet most bollards in SA do not meet the requirements of standards in place since 1996. In 2016, a cyclist died after hitting a bollard.

(Re: the Civil Liability Act 1936, this is not a nonfeasance issue but a malfeasance one as standards exist but are being ignored. Other information is also ignored. For example, Adelaide City Council has already conducted two Road Safety Audits, both of which identified non-compliant bollards as a problem. We are not aware of a single compliant bollard in their council area.)

We do not have the funds to proceed to the next step, namely suing councils, and to do so would affect our working relationship with councils.

DPTI has the power to require councils to address non-compliance with technical standards, including issuing a (small) fine and a direction to remediate. We would like a method for reporting non-compliance to DPTI with an expectation that this trigger a process of exploration and mediation as a precursor to a non-compliance notification (which might be issued after review of the 'expert panel' mentioned earlier.) This will help councils to understand their duty of care and take negligence issues seriously – neither of which they are currently doing, at least for cyclists and arguably not for pedestrians.

6) Speed

- a) *Local streets*. Speed affects safety, but also amenity. The Bicycle Institute would like to see 40km/h (or preferably 30 km/h) speed limits on residential streets, especially in the inner area. In particular, we are advocating for low-speed streets that are both a transport corridor and a public green space for residents. Such multi-use spaces are common in other countries and assist in ensuring cities remain liveable given higher densities in inner urban locations. Low-speed environments also present a practical alternative to a large-scale roll-out of cyclist infrastructure, with attendant costs and impacts.

We are aware that speed is a political issue: most drivers vastly over-rate the impact of speed zones on their trip times (our experiments found 1 second impact for a 40km/h, 12 seconds for 30km/h in Norwood) and fail to understand that this would only affect the 'final kilometre' of their trip.

Norwood Payneham St Peters gives an example of how not to implement a 40km/h zone, electing to give no reasons for such a change to its residents before polling them. Indeed, when the Bicycle Institute pasted a few flyers on poles explaining what such a change might give rise to, these were removed within a few days (unlike advertising for events and lost dogs!). Despite its reticence, NPSP actually had bowed to resident pressure and earlier implemented a 40km/h speed limit in one area. The Bicycle Institute would like to see the issue of lower residential speed zones tested in a citizen's jury, where the reasons and impacts can be properly put and discussed.

b) *Urban arterials*. It is well known in traffic engineering that higher speeds do not translate into higher capacity due to the greater stopping distances, etc, required and the 'shock wave' impacts of stop/start traffic. Variable speed limits can improve congestion by smoothing traffic flow. However, many cyclists and pedestrians could also speak of the frustration of waiting to cross a major arterial and finding cars continuing to move at low speed along the arterial road rather than stop. We feel that there should be some opportunities for synergy, for example by implementing traffic management approaches suited to low-speed environments when lower speed variable speed zones are implemented.

c) *Destination streets*. Many streets are compromised for walking and cycling by prioritising for traffic with no local destination. These rat-runners often travel at inappropriately high speeds. This is most clearly the case in Adelaide City Council, as this is an obvious destination, but also occurs in other council areas.

The Bicycle Institute would like to see low speed, shared street design – as used in Europe and Auckland – in streets such as (say) Rundle Street, Adelaide. This design permits access to local land uses, including car parking, but does not prioritise through movement over destination uses. We would also like to see greater use of street closures, as exist in Unley.

7) Clearways

The Bicycle Institute supports the state government's extension of clearway hours. Clearways are typically on arterial roads with parking available in side streets and often in off-street parking. In many cases – such as Portrush Road – it is hard to see how allowing parking adjacent to narrow traffic lanes used by heavy vehicles, where drivers and driver-side passengers enter/ exit cars from the traffic lane, can be safe. (In comparison, riding along such roads is parallel to traffic movement, with a reduced speed differential to traffic due to the bike's movement, and requires only 1.5m compared to 2.3m for car parking.)

In addition, however, the parking that is allowed in non-clearway times should be reviewed on a regular basis with respect to local conditions. In many locations, the combination of no stopping zones and other restrictions means that the parking allowed in clearways is minimal and its removal would enable bicycle lanes to operate full-time. In others, the assumption that clearways are needed on weekdays but not on weekends is incorrect: as much traffic is now present on many streets on a Saturday at midday as in weekday peak periods and some cycling routes are more highly used on weekends than weekdays.

For example, a single car parking space exists on the north side of Magill Road east of the driveway to Magill Village's off-street car park. The off-street car park is hardly ever full, but the on-street space is used by people who find it easier to park here and nip across the road than having to walk an additional few metres from the off-street car park. As a result, cyclists must veer out to pass a parked car at the same location where the painted median in Magill Road becomes a right turn into Magill Village, leaving little room for bikes and cars to safely share Magill Road. This stressful and hazardous situation, which occurs on weekends as well as weekdays, could be remedied by the removal of the single on-street car park with no noticeable impact on local traders.

In many cases, the creation of full-time bike lanes would allow a segregating treatment to be installed (e.g. armadillos), making bike facilities better suited to a larger cross-section of the community. This is particularly near pedestrian-only signals, which provide arterial road crossings mid-block rather than at intersections and hence create a dogleg or detour for cyclists using local streets on either side of the arterial road. In the absence of a short section of protected bike lane, cyclists are forced to choose between using

often narrow footpaths heavily used by pedestrians or veering past a parked car into arterial road traffic – with school kids instead getting a lift from Mum or Dad. Here, it is worth noting that the reduction in car traffic we all welcome during school holidays is actually only about 10%. Reducing the prevalence of “Mum’s taxi” trips by less than one a week would deliver these conditions all year round.

Cycling near schools is not always in the peak commuter direction. For local school children, travel patterns may be away from the City in the morning and towards the City in the afternoon; or at midday, to reach local facilities in lunchtimes. At these times, peak hour bike lanes facilitated by clearways do not operate. The broader roles and impacts of clearways on cycle traffic should be included in the assessment of clearway need and times of operation.

Why the Bicycle Institute supports a trial of relaxing mandatory helmet laws for bikeshare and riding on bike paths.

Fay Patterson, 24 October, 2017

First and foremost, why relax helmet laws? No-one likes to see a loved one hurt in a bike crash and most cyclists have a 'Thank God for the helmet' story, so why do it?

Well, it also isn't pleasant to have a loved one die from cardio vascular disease (CVD) or cancer, and cycling halves the personal death risk from both of these diseases.

Putting some numbers around this, in the 12 months to Sept 2016, there were 35 cyclist deaths on Australian roads¹. In the 2016 calendar year, there were 45,392 deaths from CVD and 44,100 from cancer². Rates of overweight or obesity (the main risk factors for CVD/ cancer³) are expected to increase from about 64% in 2014-15 to almost 80% of Australians by 2025⁴ – at a cost to the health system of \$21 billion (\$9 billion more than in 2014⁵).

A Dutch study⁶ estimated that for people who shift from car to bicycle, the beneficial effect of increased physical activity due to cycling would be about 9 times more gains in life-years than the losses in life years due to increased inhaled air pollution + traffic accidents. The study also noted that for society as a whole this could be even larger because of reduced air pollution emissions, and if the risk presented to other road users is included, the risk of a fatal traffic accident is virtually the same for cyclists and car drivers.

There is evidence that helmet laws discourage cycling. Apart from the NT experience, a national survey undertaken in 2011⁷ found that 60% of respondents had access to a bicycle, but most rarely used it. While not the main reason, 16.5% of respondents who had ridden in the past month agreed that the mandatory requirement to wear a helmet discouraged them from riding a bicycle more often.

In an evaluation of the barriers and facilitators to the use of a public bike share program in Brisbane, 61% of focus group respondents cited helmet inaccessibility or lack of desire to wear one as the main barriers to using the program⁸. In NSW, a drop in cycling participation from 16.7% riding in a typical week to 12.5% this year coincided with a police crackdown on cyclist behaviour – including helmet wearing⁹.

Hence there is a prima facie case that helmet legislation comes at a high cost to the Australian community.

¹ Bureau of Infrastructure, Transport and Regional Economics, Policy and Research Division of the Department of Infrastructure and Regional Development; <https://bitre.gov.au/statistics/safety/>.

² Australia's Health 2016, Australian Institute of Health and Welfare; cited in www.adelaidenow.com.au/lifestyle/health/australian-health-report-for-2016-shows-cancer-deaths-now-our-leading-killer/news-story/34156acffb3bab8ded1b27b881279116.

³ Impact of overweight and obesity as a risk factor for chronic conditions: Australian Burden of Disease Study, Australian Institute of Health and Welfare, 2017; <https://www.aihw.gov.au/getmedia/f8618e51-c1c4-4dfb-85e0-54ea19500c91/20700.pdf> (see p9).

⁴ "By 2025 only 20% of Australians will be a healthy weight", The Queensland Times; <https://www.qt.com.au/news/obesity-can-lead-you-on-a-dangerous-path-to-ill-he/2590837/>

⁵ World Obesity Federation, quoted in "Obesity-Related Diseases Expected To Cost Australia \$21 Billion", Huffington Post; www.huffingtonpost.com/2017/10/10/obesity-related-diseases-expected-to-cost-australia-21-billion_a_23238534/?ncid=edlinkauhpmg00000004%3Fbenref%3Dtheage.

⁶ de Hartog J, Boogaard H, Nijland H and Hoek G (2010), Do the Health Benefits of Cycling Outweigh the Risks? Environmental Health Perspectives, Aug 2010, Volume 118 Issue 8, pp 1109–1116; www.cycle-helmets.com/health-benefits.pdf.

⁷ Riding a Bike for Transport, National Heart Foundation and the Cycling Promotion Fund, 2011; <https://www.heartfoundation.org.au/images/uploads/publications/Cycling-Survey-2011-Riding-a-Bike-for-Transport.pdf>.

⁸ Fishman E, Washington S, Haworth N (2012), Barriers and facilitators to public bicycle scheme use: a qualitative approach. Transportation Research Part F: Traffic Psychology and Behaviour 2012; Volume 15, Issue 6, pp686-698.

⁹ National Cycling Participation Survey, Australian Bicycle Council; cited in "In response to a year of increased cycling fines", Bicycle NSW, 2017; <https://bicyclensw.org.au/in-response-to-a-year-of-increased-cycling-fines/>.

In this context, how effective are helmets at saving lives? A Canadian study¹⁰ of 1994-2003 hospital admission data found that reductions in the rates of admissions to hospital for cycling-related head injuries were greater in provinces with helmet legislation than provinces without it, but that no independent effect of legislation could be found and any safety contribution from the legislation was minimal.

Closer to home, an Australian Transport Safety Bureau (ATSB) analysis of 1991-2005 national road traffic accident data¹¹ found (amongst other things) that helmet wearing lowers head injuries as a cause of death from 50% to 33%. A helmet would have 'saved your life' in about 16% of the cases studied but would have made no difference for half the cyclists killed.

So, if relaxing the helmet laws encouraged (say) 0.1% of those who'd otherwise die from CVD/cancer to ride a bike, around 45 people would live instead of die each year. Now, it would need **every single one** of these new bike riders to not wear a helmet and have a serious crash resulting in head injuries, such that 50% = 45 died, for the number of people killed by relaxing helmet laws to be equal to those saved by lower CVD and cancer rates. However, cycling also prevents/ reduces type 2 diabetes, depression, Alzheimer's, Parkinson's, etc., etc., so even in this apocalyptic-case scenario, there'd still be more people saved than put at risk by a relaxation of helmet laws. The prima face case still stands, then.

A converse question also exists: whether fining cyclists for failing to wear a helmet supports and encourages overall community health goals? 4,562 South Australian cyclists were fined \$162 each for failing to wear a helmet in 2016-17¹² – the 10th most common type of offence¹³. There is some disquiet that such penalties disproportionately affect low-income earners (who tend to have the fewest convenient, cheap transport options and worst health outcomes) and enable targeting of certain populations.

Still, if there's a risk of more head injuries, how can we be sure that a trial is a sensible thing to do?

As a start, by ensuring that the situations included in the trial are low risk. There have been very few crashes recorded in Adelaide's Park Lands over the years, pointing to the safety of off-road paths. The NT experience with off-road paths has led to an injury record in line with other states i.e. there's no evidence of a higher rate of head injuries. The ATSB study found that only 1% of cyclists are killed in 40 km/h zones and below, with 50% killed in 50-60 km/h zones, 10% in 60-90 km/h zones and 30% in 100+ km/h zones – which don't exist in off-road areas, with the possible exception of cars turning off roads crossing footpaths. An analysis of Victorian State Trauma Registry data¹⁴ found that 67% of fatal cyclist crashes involved trucks/ buses and 21% cars; that 69% of non-fatal crashes occurred on roads vs 16% on paths; and that full cyclist recovery was more likely if no car was involved (41%) compared to crashes involving a car (35%) or other vehicle/tree (24%). That is, involvement of motorised vehicles gives worse overall outcomes and is less likely in off-road environments.

For public bike systems, the London bike hire system was found to produce greater benefits than expected based on non-system cyclists¹⁵, implying that bike system riders are less likely to be involved in a crash than other cyclists.

¹⁰ Dennis J, Ramsay T, Turgeon AF and Zarychanski R (2013), Helmet legislation and admissions to hospital for cycling related head injuries in Canadian provinces and territories: interrupted time series analysis, *British Medical Journal*; <https://www.ncbi.nlm.nih.gov/pubmed/23674137/>.

¹¹ Deaths of cyclists due to road crashes (2006), ATSB Road Safety Report, Australian Transport Safety Bureau, Canberra; https://infrastructure.gov.au/roads/safety/publications/2006/death_cyclists_road.aspx.

¹² Expiation Notices 2016-2017, South Australia Police Expiation Notice System Data; <https://data.sa.gov.au/data/dataset/expiation-notice-system-data>.

¹³ "South Australians cop more than 1200 fines every day", Bension Siebert, 31 January 2017, *InDaily*; <https://indaily.com.au/news/local/2017/01/31/south-australians-cop-more-than-1200-fines-every-day/>.

¹⁴ Australian Walking and Cycling Conference keynote: "The role of technology in curbing rising injury rates in cyclists: the MetreBox." Dr Ben Beck, Deputy Head of Prehospital, Emergency and Trauma Research, Monash University, 19 July 2017.

¹⁵ Woodcock J, Tainio M, Cheshire J, O'Brien O and Goodman A (2014), Health effects of the London bicycle sharing system: health impact modelling study, *British Medical Journal*; <https://www.ncbi.nlm.nih.gov/pubmed/24524928/>.

There is some evidence that younger people are more likely to suffer head injuries than adults, so helmets should remain mandatory for young people aged under 16. Helmets should also be mandatory for racing, either on- or off-road.

And making helmets optional in some situations should not be equated with a prohibition on wearing one, or even that cyclists be discouraged from wearing helmets.

Overall, then, there is a good case to trial a relaxation in the law (or at least its enforcement), in conjunction with a good before/after study to provide conclusive answers to the helmet debate, and (we hope) settle the matter once and for all.

What we want to see in a state bicycle strategy... in brief

A target for increasing the amount of cycling

- Doubling the percentage of South Australians who cycled in the previous month from 2015 to 2025.

A commitment to spending more money on cycling

- 2% of the transport budget and 5% of any major project budget should be spent on cycling

Safer roads

- 40kph speed limits for residential streets and main street zones within the outer ring route.
- 50kph speed limit on arterial roads within the outer ring route
- 40kph posted speed limit in the CBD
- Variable speed signs to lower speed limits when roads are congested.

Transport infrastructure that caters for cyclists

- Strong bike lanes on all arterial roads
- Progressive replacement of part time bike lanes with permanent bike lanes.
- Enforcement of regulations requirement parking to be at least 10m from intersections
- Better maintenance of facilities, not accepting the excuse of nonfeasance for roadways.
- Bike lanes that reach intersections
- Safe road crossings of arterial roads on all bike direct routes

A bigger bike network

- The Greenways program completed by 2020
- The bicycle boulevard concept extended by creating 12 evenly-spaced radial bike boulevards within the outer ring route to access the city.
- Safe cycling routes within 5km of all “super” high schools.

Cycling integrated with public transport

- more conveniently located bicycle parking at train, tram and Obahn stops
- free carriage of bicycles on trains in peak periods in the contra-flow direction
- trialling of bicycles on buses, via racks or luggage trailer, with priority routes being to the Interchanges and to the Adelaide Hills

Improved driver behaviour

- Better training for learner drivers

Better decision-making

- a joint local/ state body to promote innovation in the provision of bicycle infrastructure

Better promotion of cycling

- a fully-funded signage/wayfinding strategy for all cycle ways (bike boulevards, veloways and shared use paths)

Better land use planning

- A state government guide to promote sustainable transport, including templates that can be easily dropped into council development plans

- Developers encouraged to provide/ upgrade residential streets that welcome pedestrians, cyclists and children at play