The Committee Secretary
Standing Committee on Planning, Environment and Territory and Municipal Services
ACT Legislative Assembly
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INQUIRY INTO VULNERABLE ROAD USERS - SUBMISSION

Thank you for the opportunity to contribute to the Inquiry into Vulnerable Road Users. I make the following submission in my capacity as person with a long-term interest in climate change and urban planning especially where people using different modes of transport interact. My first foray into this arena was my involvement in the design of the University of Melbourne cycle loop in the late 1970s. I am a pedestrian, motorist, sometimes cyclist.

The ACT leads Australia with its ambitious policies to address climate change. With the climate emergency, delivering on – or exceeding – the targets in these policies will be vital.

Transport fuels account for about 23.5% of ACT's CO_2 emissions and actual emissions increase each year. Our transport emissions are significantly higher than the national profile because our transport system is dominated by private vehicles.

The only way to reduce our transport emissions is to reduce consumption of transport fuels. One of the ways this can be achieved is by substituting active transport for motor vehicle trips. Active transport has health benefits as well.

However, when a person moves from travelling in a motor vehicle to walking, cycling or other means of active transport, they have far less protection in the event of a collision with a motor vehicle. It is this vulnerability from lack of protection that is a major deterrent to people from using active transport. If the vulnerability results in injury or death, then all the other benefits are negated.

To overcome these problems, it is vital to reduce the chances of people using active transport interacting directly with motor vehicles. That means keeping active transport users and motor vehicle users separated wherever possible. There are two main aspects of this:

1. suitable infrastructure
2. appropriate behaviour by road users, especially by motorists

Several other submissions to date to this Inquiry detail issues and ways of keeping active transport users and motor vehicle users separated. I support their recommendations and endorse the Pedalpower submission. Where there may be conflict between recommendations, I prefer the Pedalpower recommendations.

I provide to the Committee further evidence and suggestions to reduce the vulnerability of active transport users through appropriate infrastructure.

Continuity of paths is important

Roads are built to take people places. Would there ever be a destination (eg a shopping centre or a new suburb) built without being serviced by a road? So why are other modes of transport, especially active transport, not treated the same way that is by having paths built too?

Paths and cycle lanes need to connect, to enable people to complete their journeys using pathways and/or cycle lanes.

When roads are built, they are almost always connect up. Why don't our paths and cycle lanes?

Can you imagine the outrage from motorists if a road suddenly ended? It happens regularly to shared paths and cycle paths. Here are some examples of paths suddenly ending:

Figure 1: Example of cycle paths on only some portions of a busy roads, non-continuous and ending or starting at a major intersection (Canberra Avenue and Captain Cook Crescent, Griffith)

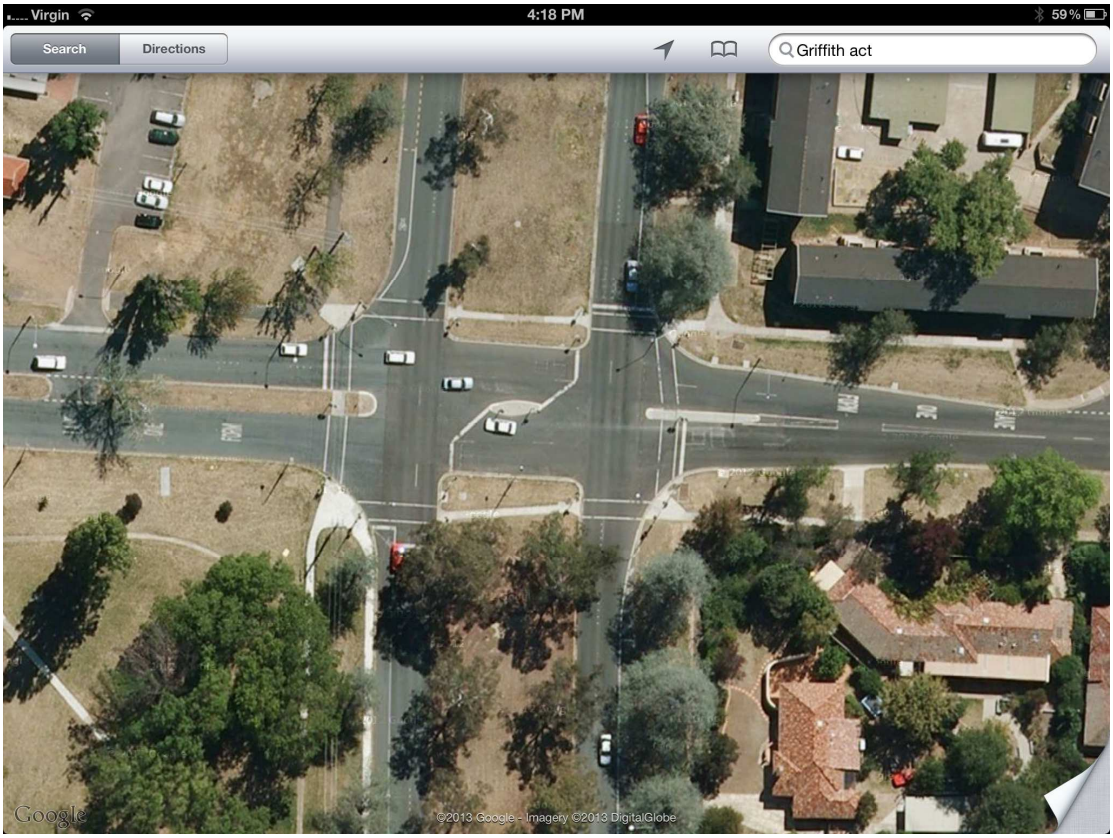

Figure 2: On-road cycle lane on Captain Cook Crescent southbound ends at Stuart Street intersection. This situation is made more dangerous for cyclists by the number of vehicles (including buses) that turn east into Stuart Street, many of them using the cycle lane as a turning lane.

Figure 3: Path ends (Favenc Circle, Griffith)

Off-road paths need to link with each other on either side of the road, rather than being forced onto the road.

Frequently, off-road paths direct active transport users onto roads and/or driveways.

Stuart Street at Throsby Crescent (Griffith/Narrabundah border) is a good example:

Figure 4: The connecting pathway along Griffith/Narrabundah border (between Lindsay and Stuart Streets) directs users coming down the steep path directly onto Stuart Street at intersection with Throsby Crescent (near busy Griffith Shops). Users who are on wheels or running are no longer slowed down since the barrier was removed. This potentially delivers a high speed active transport user blindly into the path of motor vehicles travelling at up to 50 km/h (and frequently at 60 km/h) along Stuart Street or head-on into vehicles coming up Throsby Crescent. Neither the person using the path nor the motorist on Stuart Street would see each other. Motorists on Throsby Crescent may stop at the stop sign (frequently they do not) but invariably only look for vehicles on Stuart street and not for people on the path : they do not register them, even if they are stopped at the bottom of the path.

When an off-road path meets a road, frequently there is no continuing path on the other side of the road. What does the path user do?

For example, the paths on either side of Throsby Crescent are not met by paths on the other side of Stuart street. Instead, path users have a choice of walking over the kerb onto the nature strip or up a driveway on the high side of the street to join the path there or (much worse) traversing the intersection to reach the path connecting to the next street (Meehan Garden):

Figure 5: Paths at the intersection of Stuart Street and Throsby Crescent, Griffith/Narrabundah border.

Favenc Circle, Griffith provides several other examples:

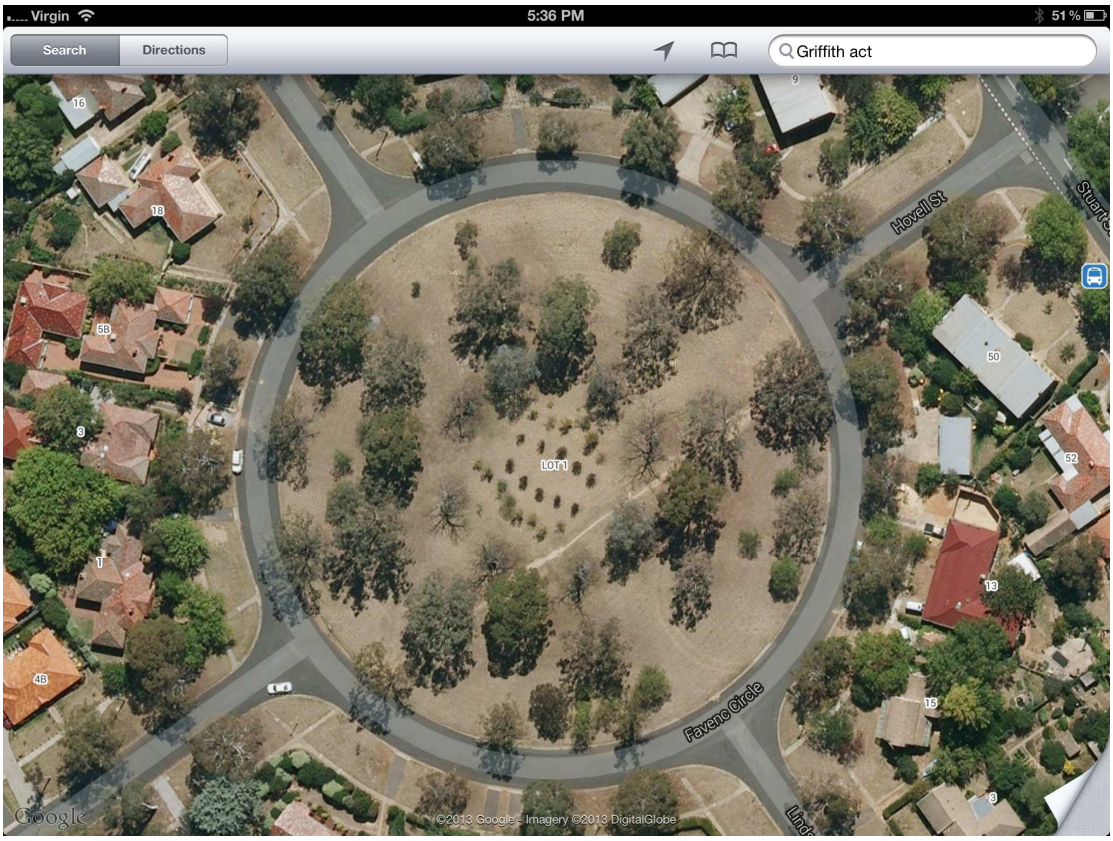

Figure 6: Aerial view of Favenc Circle, Griffith, showing disconnected pathways and paths ending even before reaching the kerb.

Figure 7(a): Paths that ends on one side of the road…

Figure 7(b): …even if there is a path on the other side of the road (or is it to avoid the tree?) (Favenc Circle, Griffith)

This example is on the median strip of busy Captain Cook Crescent, Narrabundah. Here, a path user has a choice of:

(a) taking the shortest route to the path on the other side, which means negotiating up the kerb and then traversing the nature strip or

(b) diverting to the right to make use of the ramp provided by the driveway. This is likely to be the route chosen by people using wheels (eg cyclists, people with prams, cyclists) but puts them at further risk by having them turn their backs to oncoming traffic (which is coming over the crest of a hill):

Figure 8: Path across median strip of Captain Cook Crescent, Narrabundah (west side of intersection with Wild Street)

Mis-directing path-users can have fatal consequences.

In this example, a path has been constructed to join two offset paths. It may have followed a route that pedestrians took between the two paths. Unfortunately, people coming off the interconnecting path between the houses are directed to turn their backs on the traffic to join the path across the median strip. In one case, this had fatal consequences. There used to be evidence of traffic lights previously installed or planned to be installed; traffic lights would have helped avoid this outcome. The alternative is for people to walk up to the next driveway and then cross the road at right angles.

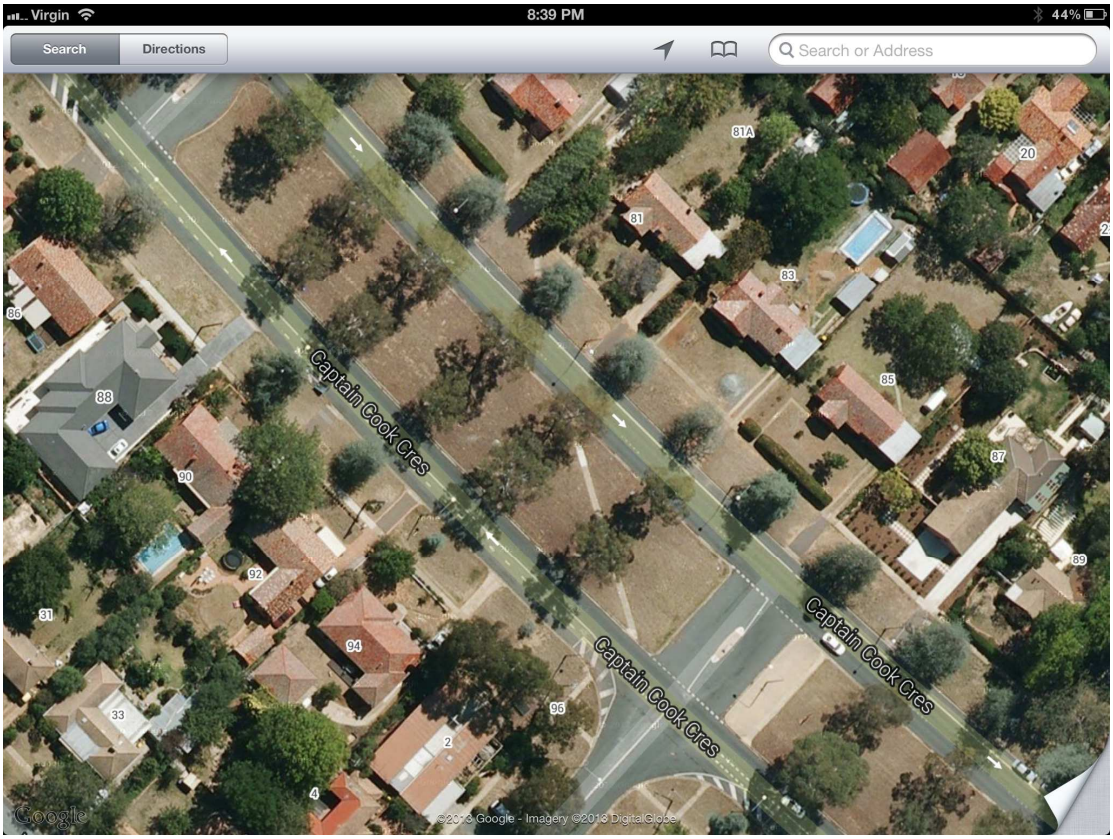

Figure 9: Footpath design encouraging south-bound pedestrians to walk in same direction as traffic, a recipe for disaster that has resulted in fatality. (Median strip, Captain Cook Crescent, Griffith/Narrabundah border)

Figure 10(a): Ground-level view of how the footpath crosses the south-bound carriageway of Captain Cook Crescent

Figure 10(b): Road markings from the traffic investigation are still visible on the carriageway several years after the fatality.

Figure 10(c): This picture shows a car at about the point the pedestrian was fatally struck. He was walking from the footpath on the other side of the street (diagonal to the kerb, between the car and the largest cedar tree in the middle of the picture) toward the footpath in the foreground.

Starting a path or cycle lane without a suitable approach can also be dangerous.

Frequently, a cyclist has to navigate a difficult intersection *before* reaching the relative safety of the on-road cycle lane.

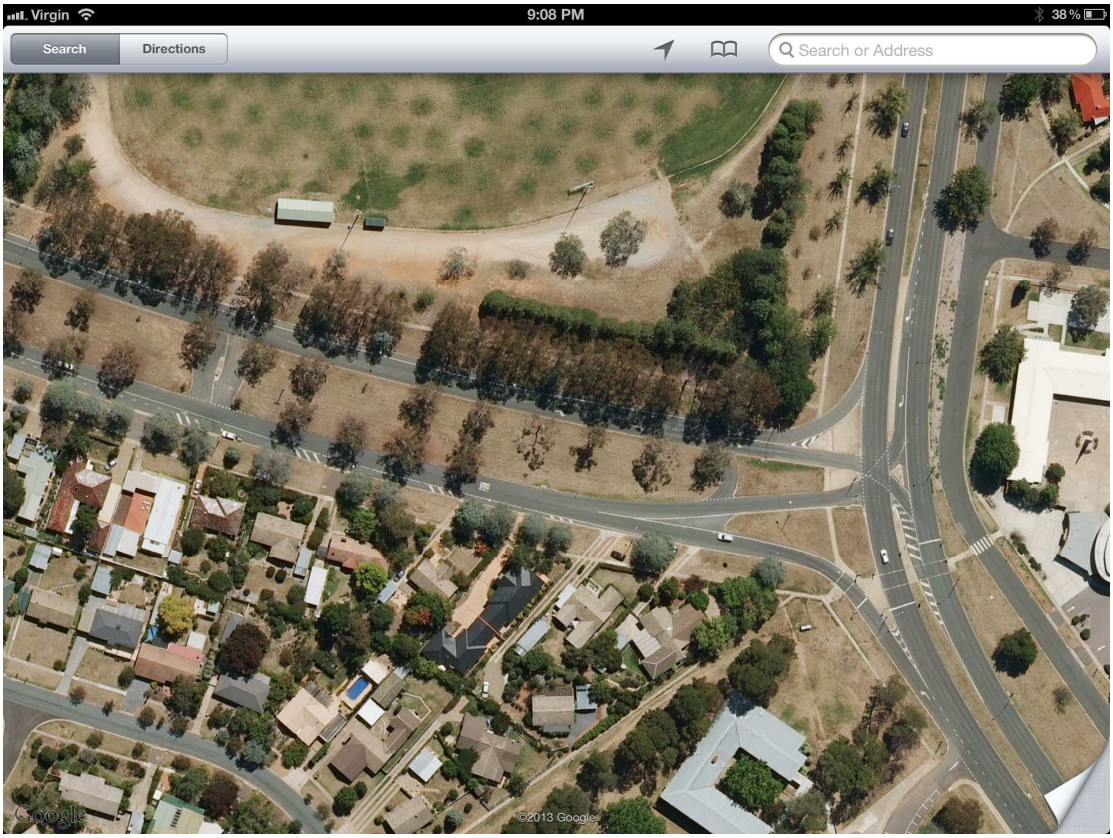

Figure 11: Left of picture shows on-road cycle path on west-bound carriageway starting *after* a complicated intersection between feeder roads. Cyclists and motorists have no separation or on-road guidance on how to interact through the intersection. (Captain Cook Crescent, Narrabundah west of intersection with Jerrabomberra and Sturt Avenues)

Can I get there – and back? And can I do it safely?

If they are installed, on-road cycle lanes are often available on one side of the road. Given that cycle lanes in Canberra tend to be installed only on busier roads, having cycle lanes on one side of the road means that cyclists are completely integrated with motorists for half their return journey.

Captain Cook Crescent is a classic example. Both carriageways have a parking lane. A cycle lane (or path) is available on the north-bound carriage way but not on most of the south-bound carriageway. The road is busy and used by different types of cyclists, including many school children. If you travel the road by car you would not know that it is a deceptively long hill in both directions with a crest in the middle. This means that cyclists travelling uphill tend to travel slowly – not what motorists generally like to be stuck behind.

Figure 12: Road with parking and cycle lanes on one carriageway (northbound) but parking lane only on the other (southbound). (Captain Cook Crescent)

How does this work in practice?

If a cyclist is riding north, they can use the cycle lane. This means they are moderately separated from the majority of motor vehicles.

But this moderate separation afforded by the cycle lane only applies if a motorist is not using the lane as their private overtaking, turning or merging lane (because, since the parking and cycle lanes were installed, there is only one 'transit' lane). Cyclists

are particularly vulnerable near intersections, where the road markings are confusing for motorists and cyclists alike:

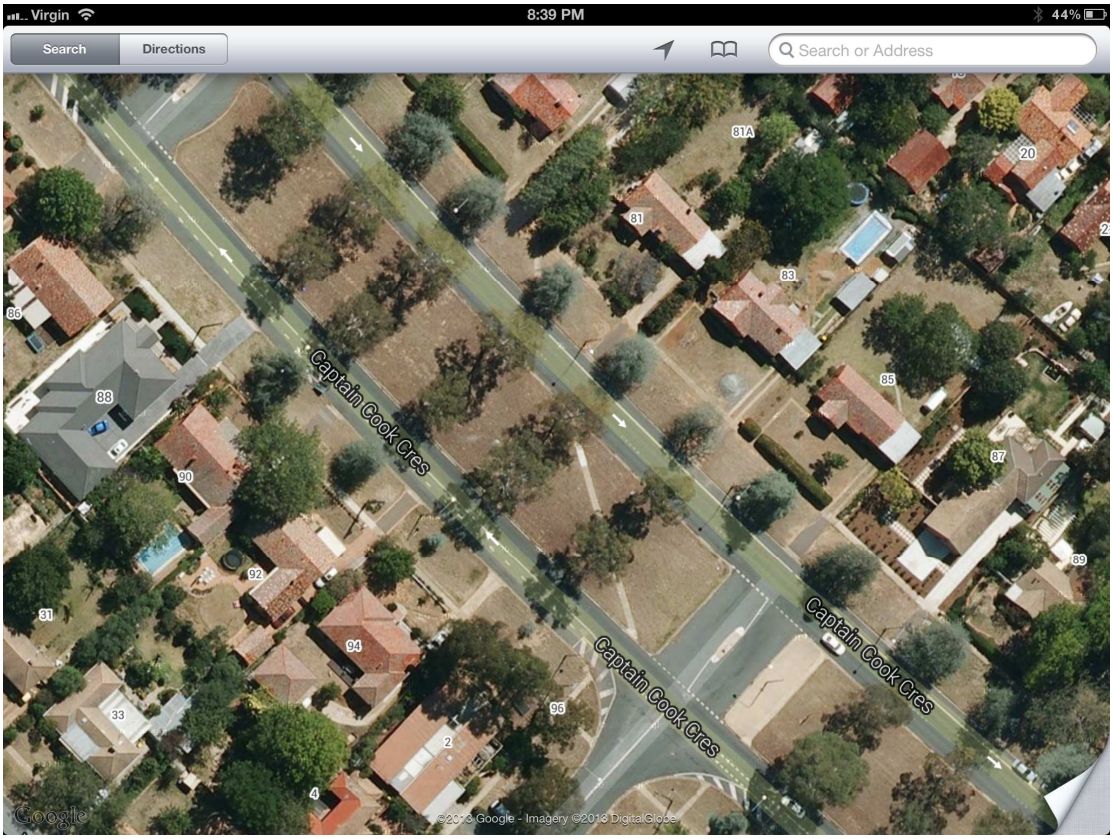

Figure 13(a): Confusing road markings: Does a motorist turning left our of Captain Cook Crescent have priority over a cyclist using the cycle lane? Does a cyclist turning left into Captain Cook Crescent have to turn into the 'transit' lane and then move into the cycling lane? If a cyclist rides in the parking lane (e.g. on roads where there is only a parking lane), are they allowed to ride over the area marked as an extension of the nature strip?

Figure 13(b): Detail of southeast corner of intersection shown in Figure 13(a).

Figure 13(c): Further detail of southeast corner of intersection shown in Figure 13(a).

If the cyclist is passing a parked vehicle, they are also vulnerable to running into an opening door:

Figure 13: Cycle lane occupies part of the parking 'door zone' of the parking lane. (Northbound carriageway, Captain Cook Crescent)

If a cyclist is riding south, there is no cycle lane to use.

They can choose to ride in the left-most 'transit' lane, but, as there are two 'transit' lanes on that carriageway, it means that they will be riding in the middle of the carriageway and likely to raise the ire of motorists.

Or they can choose to ride in the parking lane, which means that they are moderately separated from the majority of motor vehicles…until they reach a parked vehicle. This can be particularly difficult for cyclists struggling up the hill – especially if there is a motor vehicle approaching in the adjacent lane. Do they try to assert their right to occupy the adjacent lane (if they can get there before a motor vehicle) and risk being run over? Do they slow down even more or even stop…and then find it difficult and/or dangerous to re-start their cycling uphill? Or do they persevere with riding in the lane and hope that the approaching vehicle passes them before they crash into the parked vehicle? This situation is even more dangerous and confusing for inexperienced or child cyclists or when the parked vehicle is a truck (because trucks are wider than the parking lane).

Figure 14: Road with parking lane only. If a cyclist rides in parking lane, what do they do when they encounter a parked vehicle? (Captain Cook Crescent southbound carriageway)

It's often the little things that count

When it comes to reducing interaction between active transport users and motor vehicle users, details of how paths and ramps are constructed can make a big difference.

Ideally, paths allow users to complete their journeys seamlessly. Users should not have to worry about whether they can reach their destination in one piece or exhausted from navigating the terrain.

Encountering a step or steep gradient can dramatically impede or stop a path user's progress – particularly if they are using wheels. Yet path users frequently encounter these obstacles when off-road paths inevitably cross roads. And it can lead to path users spending more time on the road they are crossing – and thus at the mercy of motorists on the road.

Figure 15: Path without ramp to road. The difficulty traversing this step deters pram users from using the path – and, if they do, they spend longer crossing the road as they manoeuvre the pram up or down over the kerb. This obstacle is impossible for most cyclists to traverse. (Corner of Hovell Street and Meehan Garden, Griffith)

Ramps connecting paths to roads dramatically improve the ability of path users to cross a road.

Poor ramp design and construction can still provide impediments to path users at roads:

Figure 16(a): High lip where ramp meets road provides an obstacle for path users with wheels (which means they spend longer on the road as they try to get over the lip) and a trip hazard for pedestrians. Steep section between ramp and main pathway compounds the problem. (Wild Street and Walker Crescent intersection, Narrabundah)

Figure 16(b): High lip, steep ramp and uneven paving present obstacles for path users with wheels and a trip hazards for pedestrians. (Captain Cook Crescent)

Different gradients for path ramps are common. Some ramps are very user friendly because of their low gradient, others are steep.

Figure 17: Path ramps to roads vary in gradient. Only the one in the bottom left of the pictures above is user-friendly. (Meehan Gardens)

Ideally, all ramps should be constructed without lips and with low, even gradients.

There is also a lack of uniformity (and sometimes common sense) in the width of path-to-road ramps.

The intersection of Marcus Clarke and Alinga Streets in Civic is heavily used by pedestrians and cyclists – yet only some of the ramps reflect this. Two of the ramps are narrower than the crossing markings that they service. One of the ramps between path and road is narrower than ramps in quiet suburban areas. This poor design raises the risk of an accident, either from a collision between pedestrian and cyclist or from a pedestrian tripping as they move onto or off the road.

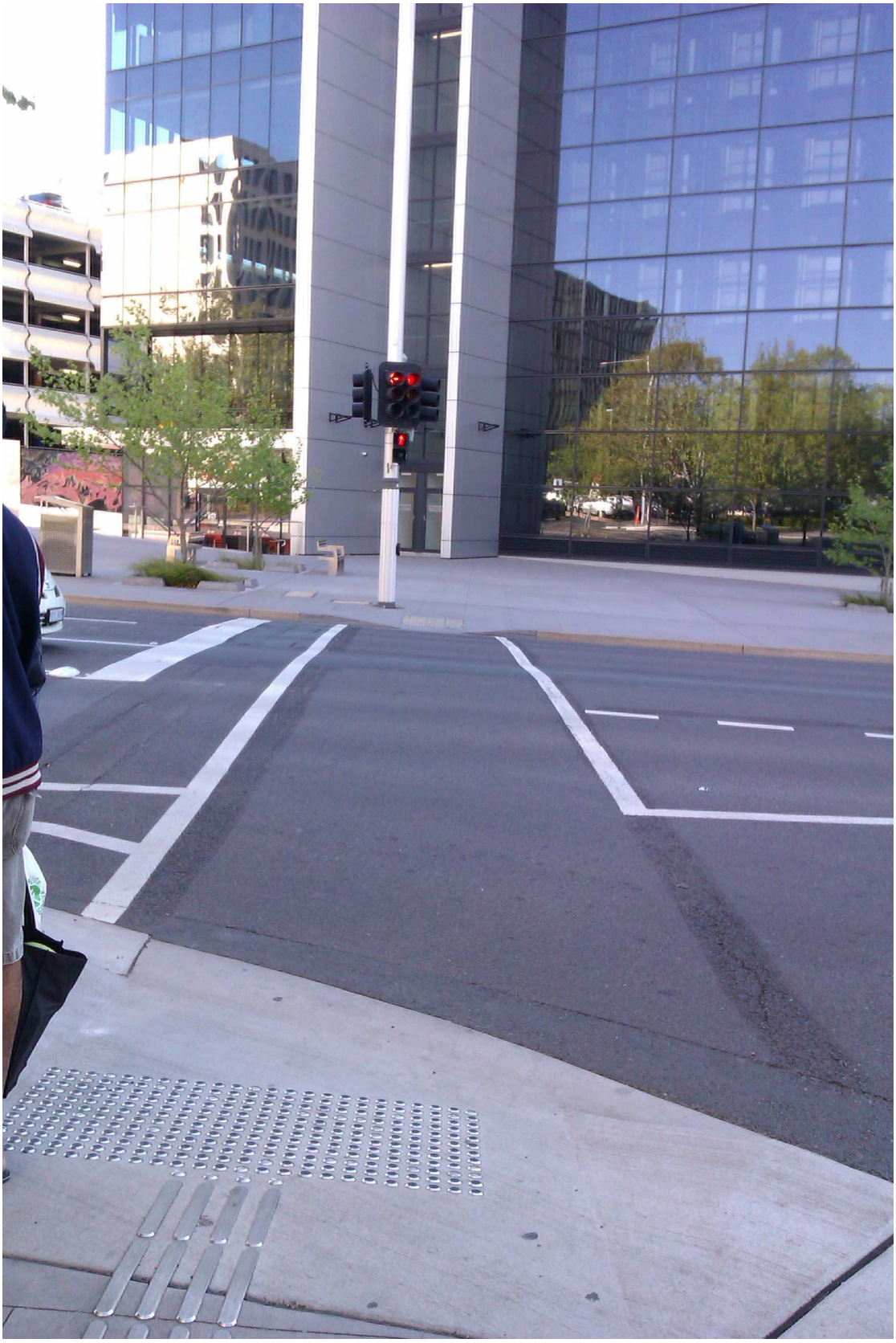

Figure 18(a): Road crossing on northwest side of intersection of Marcus Clarke and Alinga Streets in Civic, showing very narrow ramp on northern side, wider ramp on southern side.

Figure 18(b): Road crossing on northeast side of intersection of Marcus Clarke and Alinga Streets in Civic, showing pedestrians and cyclists waiting to cross using narrow ramp.

The best road crossings for paths are where the path crosses the road seamlessly, without any change of level, and where vehicles on the road clearly have to slow down and give way to people using the raised crossing:

Figure 19: This pedestrian crossing is given clear priority over road users and is seamless with paths on either side of the road. (Throsby Crescent, Griffith)

Conclusion

Careful infrastructure design and construction, with attention to detail and the needs of vulnerable road users, can make a huge difference to how easy and safe it is for people to use active transport. This in turn will help the ACT reduce its greenhouse gas emissions, improve the health of its population and become an even more pleasant place to live.

I am happy to discuss these comments and examples further.

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INQUIRY INTO VULNERABLE ROAD USERS – SUPPLEMENTARY SUBMISSION

Further to my submission of 25 October 2013, I wish to provide the following further information to the Committee.

On 26 October, while visiting the French Australian Pre-School fete, I was looked at Astrolabe Street, Red Hill in detail for the first time since it was altered to improve safety for children accessing the various educational institutions on the street and Red Hill School in particular.

It appears that the alterations have improved pedestrian safety by:

- making the street one way, reducing the direction of vehicle movements that pedestrians have to consider
- clearly delineating parking to be off the paths on both sides of the street and
- providing a raised pedestrian crossing that gives pedestrians priority over motor vehicles – although this would be much better if it included clear signage that it is a pedestrian crossing and that vehicles are to give way to people on the crossing, rather than just having to negotiate a speed hump.

Bicycle lanes have been installed. While they give some clear space to cyclists, the bike lanes suffer a number of deficiencies.

Like most bike lanes in Canberra, the ones in Astrolabe street suffer from:

- sudden beginnings and endings
- occupying the parking 'door zone' they run past cars parked parallel to the street
- placing cyclists at a T-intersection in a dangerous and confusing situation.

However, of most concern is that the **bike lanes pass behind the rear of vehicles occupying the angle parking on the street. This places cyclists in grave danger of being hit by a reversing motor vehicle**. A cyclist approaching the angle parking areas is unlikely to be seen by vehicles reversing from those spaces. Children are the most likely cyclists in this location – and also, because of their small size, also the least likely to be seen by and the most likely to be hit and injured or killed. **This is a new, systemic hazard introduced to cyclists with the safety 'improvements' to the street.** It is a stark example of the need to have cycle lanes physically separated from roadways, or, at the very least, closer to the kerb than both moving and parked motor vehicles.

Attached are photographs that illustrate these dangers.

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Sustainability Facilitator
Sustainable Jill

28 October 2013

Figure 1: This road crossing serves pedestrians well…but the bike lane puts cyclists directly into a very dangerous situation. (Astrolabe Street, Red Hill)

Figure 2: The bike lane ends suddenly before the road crossing. Another bike lane starts further along the street, after the crossing – and on the opposite side of the street. What is a cyclist to do?

Figure 3: The bike lane starts suddenly, after the road crossing shown in Figure 2 – and on the opposite side of the street. (Astrolabe Street, Red Hill)

Figure 4: Cycle lane occupies parking 'door space'. (Astrolabe Street, Red Hill)

Figure 5: End of cycle lane, alongside a primary school – Who has the priority: a cyclist (turning right or left) or a motor vehicle turning right? (Astrolabe Street at junction with La Perouse Street, Red Hill).