Inquiry into e-mobility safety and use in Queensland

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On behalf of the Brisbane West Bicycle User Group, please accept the following submission to the **Inquiry into e-mobility safety and use in Queensland**.

As a local stakeholder group representing the interests of those who walk, cycle and scoot in the western suburbs of Brisbane, we have consulted with our membership base regarding the terms of reference of this inquiry to sample their views and opinions which inform this submission.

Increasing rates of micromobility – walking, cycling and personal mobility devices – represent a huge potential benefit to the community as a more sustainable alternative to personal travel undertaken in private motor vehicles. These benefits are broad across health, the economy and environment and sustainability. However, as these rates increase, competition for scarce micromobility infrastructure combined with road infrastructure carrying high numbers of motor vehicles of ever-increasing size is leading to tension across road user groups. The rapid uptake of new devices like e-scooters, e-skateboards and one wheels is resulting in a new category of road related injuries which is creating community concern.

Pedal assisted electric bicycles (e-bikes) have been well defined and legally and safely sold and used across Queensland for well over a decade, enhancing and making cycling accessible to many more people who would otherwise find riding a traditional bicycle for transport too daunting.

Unfortunately, an influx of non-pedal assisted, overpowered and illegal electric motorcycles are incorrectly being categorised by public, media and regulators as “e-bikes”, and we are concerned that this “guilt by association” will result in unnecessary regulatory impost on these safe, efficient and popular pedal assisted e-bikes.

Legislation, regulation and enforcement is playing catch up, and this has unfortunately led to inconsistencies across all levels of government and results in poor understanding by members of the public about what devices are legal, how they are to be used, where they can be used and who can use them.

It is our hope that as an outcome of this inquiry, Queensland will:

1. Recognise the importance and benefits that micromobility plays in modernising and improving the efficiency of transport networks in our cities and towns, the health of our community, the household bottom line and the economic prosperity of the state
2. Clearly define the different classes of legitimate and illegal micromobility vehicles.
3. Prioritise the implementation of a Micromobility Network Plan that will supersede the ineffective and largely ignored Principal Cycle Network Plan

4. Implement appropriate regulatory frameworks to control the sale, use and proliferation of illegal micromobility devices, and advocate same with the Commonwealth Government to prevent, as reasonably possible, the importation of these devices at the border.
5. Implement and cooperate with the Commonwealth government and other states and territories on a unified set of road rules related to pedestrians, bicycles, e-bikes and personal mobility devices.
6. Implement an ongoing public awareness and education campaign about micromobility, its benefits, and the rules and responsibilities that surround it, both for users and other road users interacting with them, from a perspective of the road user hierarchy prioritising vulnerable road users.
7. Implement State legislation that governs the requirements surrounding shared device programs implemented by local governments in terms of usage, particularly related to parking of devices on public land.

Benefits of e-mobility for Queensland (1)

Busting Congestion

The way Queenslanders travel is still very much dominated by private motor vehicles [1]. Between 2021 and 2024 according to the Queensland Travel Survey, more than 84% of all trips taken across Queensland were in a car. Even in the Brisbane City Council local government area where public and active transport are more available, and amenities generally closer to residents, 80% of all trips were still taken by car.

Traffic congestion is one of the biggest issues raised by Queenslanders at any election at any level, particularly those living in towns or cities in the South East Corner. A mode share of 80% for motor vehicles, reflecting significant community-wide car dependence means, no matter how many new and upgraded roads are built, **traffic congestion will only get worse unless travel modes shift**.

As a general rule, a distance of 5km is a comfortable trip to take on a bicycle, e-bike or personal mobility device. Indeed, within Brisbane, 56% of all trips between 2021 and 2024 were **less than 5km in distance**. However, **75% of trips under 5km were taken by car**.

Only 2.06% of trips under 5km were taken by bicycle, e-bike or e-scooter. E-bike and e-scooter made up only 0.43% of those.

[1] Queensland Household Travel Survey—2021-24—POOLED SEQ - Queensland Household Travel Survey Series - Open Data Portal | Queensland Government

Worryingly, this has dropped from 2018-2021 – in which 2.23% of all trips under 5km were taken by bicycle – statistics did not differentiate between bicycles, e-scooters and e-bikes prior to 2021.

The more trips that are taken by micromobility instead of driving, the bigger the benefit to reducing congestion.

Currently Queensland, and particularly the Brisbane City Council local government area, is failing to capitalise on the congestion busting benefits of micromobility, and particularly the increased accessibility of micromobility afforded by e-mobility options.

We will touch on the reasons for this in Safety.

Increased mobility independence for young and old

While we acknowledge that Queensland Road Rules forbid the use of Personal Mobility Devices (PMDs) for children under 12, and only permit their use for children 12-15 under adult supervision, it should be made clear that e-bikes (pedal assisted e-bicycles) do not have any age restriction, consistent with "analogue" bicycles.

Currently around 85% of all Queensland school children are driven to school, and only a small fraction ride bicycles, let alone e-bikes or PMDs. Independent travel to school is positively linked to better mental wellbeing, physical health and academic outcomes [2]. For some children, uncomfortable school uniforms, heavy school bags and the hot and humid subtropical climate of Brisbane are deterrents for using a bicycle, however, an e-bike takes away that discomfort.

There is a significant opportunity for e-mobility, particularly legal pedal assisted e-bikes, to increase individual, independent mobility for children getting to school and around their local communities. However, many parents fear for the safety of their children travelling independently, predominantly from the risk posed by motor vehicle traffic.

Many of our members are also aged 50+ and use e-bikes to get around as their primary form of transport.

Sadly there are regular fatal motor vehicle crashes involving older drivers. Safety issues related to driving among older people are growing, however it is also noted that driving represents the only option for independent mobility for older Australians, which is important to enable people to age in place.

E-bikes represent an opportunity for older Queenslanders to maintain their independent mobility without being reliant on driving. However, similar to parental concerns, many older people are deterred by fears posed by mixing with motor vehicle

[2] The Importance of National Ride2School Day: Encouraging Active Travel Among Students | Constable Care

traffic, or have experienced a negative situation that has put them off riding regularly. As such, some older members of our community drive with their bikes to a safe location to start a ride, which limits the benefits e-mobility and e-bikes present to both reducing congestion and reducing aged car use.

Environmental Benefits

As noted in Busting Congestion, Queensland is extremely car dependent. Brisbane's 80% mode share of driving results in significant contribution to Australia's transport sector greenhouse gas emissions. While the transition to electric vehicles will reduce this, another major environmental factor created by motor vehicles is microplastic and rubber particulate caused by tyre wear. This is a factor regardless of the tailpipe emissions. Electric vehicles being heavier and often with thicker tyre compounds may increase this pollution.

Environmental waste from motor vehicles being from oil, old and worn out tyres and disposed car wrecks is a significant waste management hazard.

The urban heat island effect caused by asphalt and concrete associated with motor vehicle lanes and parking is another symptom of high levels of car dependence.

The potential of e-bikes and PMDs to replace the 2nd or 3rd family car will have significant environmental benefits both in terms of day to day emissions and pollution, but also reduced demand for road space and parking, and easier disposal and recycling. It is acknowledged of course that batteries and tyres for e-bikes and PMDs present similar waste management challenges, but at a vastly smaller scale than a standard motor vehicle.

Health Benefits

Australia is in the middle of an obesity and inactivity health crisis. In 2022, 26% of children aged 2-17 and 66% of adults were overweight or obese [3]. This is leading to increasing rates of heart disease, diabetes and some cancers.

A significant contributor is sedentary living. In 2022, only 23.9% of Australians aged 15 and over were meeting the physical activity guidelines, and 46% of people aged 18-64 described their day at work as "mostly sitting" [4].

As noted, more than 80% of trips made in Brisbane – and 85% in Queensland – are by car. Long car commutes are also correlated with poor mental health. A study in Spain found that the more time workers spent driving, the less sleep they got, the more

[3] Overweight and obesity, Summary - Australian Institute of Health and Welfare
[4] Physical activity, 2022 | Australian Bureau of Statistics

depressed and under pressure they felt and the worse their mental health was in general [5].

Walking, cycling, e-bikes and e-mobility represent a real opportunity for people to shift how they travel, increase their incidental exercise, improve their mental health and wellbeing and improve their standard of living. A study in 2022 found that people who cycled 130 minutes per week – a 13 minute commute each way – would improve their life expectancy [6].

While pedal assisted e-bikes are less physically strenuous than "analogue" bicycles, studies have consistently found that those who take up riding an e-bike gain as many physical health benefits than those who take up riding a regular bicycle [7]. This is because people who ride an e-bike rode for longer, and rode more often, and were less deterred by weather and hills.

The popularity of e-bikes in Queensland has been evident for a decade, and subscription services like Lug and Carrie, which enable people to lease an e-bike to keep at home and use on a week to week basis has been a successful gateway for people to try an e-bike before committing to buy.

Even e-scooters without any pedalling and a largely stationary position on board has demonstrated some physical activity gains over driving [8]. Though it is a stretch to consider e-scooters and personal mobility devices "active transport", and we think there is an importance in differentiating between that and "micromobility".

Every Queenslander who swaps a driving trip for an e-bike or personal mobility device trip represents a net health benefit to the community.

Cost of living benefits

After housing, transport represents the largest cost to Queensland households. For most families, motor vehicles are the main transport cost. The RACQ's Vehicle Operating Cost Report 2024 estimates that the average light vehicle costs $12,028.91 per year to run, while the increasingly popular large SUV and all terrain vehicles range from $19,000 to $26,000 per year to run.

In 2024, the top 6 best selling new cars in Australia[9] were all SUVs or utes, so Australians are choosing more expensive to operate cars.

[5] Commuting by Car Is Hurting People's Mental Health - Business Insider
[6] Cyclists Have a Longer Lifespan, a New Study Suggests
[7] Riding Electric Bicycles Boon To Health And Not Cheating, Confirms Literature Review
[8] Are e-scooters active transport? | Bicycle Network
[9] Australia's best-selling cars, utes and SUVs for 2024 | RACV

According to the Queensland Household Travel Survey data 2021-24, on average, Queensland households own 1.84 cars. In Brisbane City Council LGA, just over 50% of households own 2 cars, and 15% own 3 or more [10].

Conversely, a standard pedal assist e-bike has an initial outlay between $1,500 and $3,000, and a personal mobility device between $800 and $2,000. With maintenance and electricity charging costing $200-$300 per year, and a decent device being usable for at least the same typical lifespan as a car – 5 years – that equates to an annual outlay of under $1000. If a family purchased 2 or 3 devices to replace the 2nd car, they would save up to $15,000 per year in vehicle costs alone.

Replacing one or more of the family cars with e-bikes or personal mobility devices represents a significant cost saving to the average Queensland household.

Economic Benefits

All the previously mentioned benefits lead to positive economic benefits. In addition, e-bikes in particular open bicycle tourism opportunities to Queensland's economy. The Brisbane Valley Rail Trail has drawn significant tourism investment into the region, and other rail trails are developing apace to reap similar rewards.

Visitors to cities like Brisbane increasingly prefer to explore the city on e-bikes and PMDs rather than hiring a car or catching a taxi, and it enables more organic exploration of the city while enabling greater distances to be covered than by walking.

A stable, consistent and supported environment for e-bikes and e-mobility will enable tourists to better explore Queensland's towns, cities, beachside and outback communities alike.

Cycling, e-bikes and e-scooters already represent a massive boost to the national economy, with WeRide Australia estimating economic benefits around $18.6 billion in 2022 [11].

Increasing the rate of e-bikes and personal mobility device usage will have increasing economic benefits to Queensland.

Transport budget benefits

While engaging in a program of building out active transport infrastructure comes at a cost, the cost of building that infrastructure is a fraction of the cost required to build new roads, new tunnels, extra lanes and dedicated public transport infrastructure like rail, light rail and bus ways.

[10] Queensland Household Travel Survey—2021-24—POOLED SEQ - Queensland Household Travel Survey Series - Open Data Portal | Queensland Government
[11] Largest ever national study reveals cycling's triple bottom line | We Ride Australia

Cycling infrastructure returns up to $5 for every $1 invested in terms of economic benefits and represents huge value for money for the Department of Transport and Main Roads[12]. **Embracing micromobility not as a problem to solve, but as a solution to promote will have significant positive benefits to the Queensland budget bottom line.**

Olympics 2032

With the Olympics coming to Queensland in 2032, thousands of international tourists will be descending on our cities and towns who are used to getting around at home and when abroad by public transport and micromobility.

There is a huge potential benefit in attracting return tourism by ensuring cities like Brisbane are well equipped to prioritise micromobility and make travel by walking, cycling, e-bike and e-scooter intuitive, safe and comfortable.

A car free Olympics supported by micromobility and e-mobility will have lasting legacy benefits for Queenslanders.

Safety issues associated with e-mobility use (2)

Community Feedback

We asked our members to share their observations and concerns related to their experiences interacting with e-mobility in the community. The main themes of concerns raised were:

1. Illegal electric motorcycles – electric dirt bikes with no pedals and throttle powered – being used at high speed along Brisbane bike paths. General observations are that they are used by youths (under 18), and are often used in groups. People find them intimidating, particularly when they pass at speed without warning.
2. Personal Mobility Devices going faster than the legislated limit of 25km/h – many privately owned scooters in particular are used with disregard for the speed limitations. Owners are usually wearing full face helmets and protective clothing, indicating they are aware of the risk to themselves.
3. Shared PMD schemes in Brisbane are poorly managed, with devices left blocking pathways and ramps, users ignoring the minimum age limit (16), doubling, and generally being far less competent at operating the devices than the private scooter owners. Given these schemes are most used in high activity areas in the inner city, this creates a significant tension with pedestrians and other regular path users.

[12] Cycling investment in Queensland (Department of Transport and Main Roads)

4. 12km/h PMD limit on footpaths only makes sense when pedestrians are present, and it is not enforced at all in the suburbs, so is largely irrelevant. It is only enforced during publicity-seeking blitzes by Brisbane CBD police. Blitz enforcement is seen as ineffective at changing behaviour.
5. Delivery service e-bikes – such as those used by Uber Eats, Hungry Panda and other providers are not pedal assist, and the behaviour of delivery riders is mixed – frequently stopping in the middle of paths to check their phones, riding recklessly around pedestrians and other path users etc. The size of the motors and batteries on these bikes are clearly not compliant with E-bike legislation in Queensland.

Interestingly, **no concerns were raised about the use of legal, pedal assisted e-bikes or legal personal mobility devices**.

Cause of crashes and victim blaming

Much has been made of the rise of hospitalisations and deaths for personal mobility riders, however it is not clear how many of these are:

a) Single vehicle (PMD rider only) crashes
b) Crashes involving motor vehicles, with PMD rider at fault
c) Crashes involving motor vehicles, with motorist at fault
d) Crashes involving pedestrians or other path users, with PMD rider at fault
e) Crashes involving pedestrians or other path users, with other party at fault

However, coverage of the issue in the media, commentary on social media by members of the public and commentary from public officials is often biased to the assumption that the PMD rider was at fault.

This was never more heartbreakingly demonstrated than a case in 2024 when a 12 year old girl was riding an e-scooter to school and hit and killed by a reversing car whose driver failed to give way to her on the footpath as they are legally required. The girl's mother put more of the blame on the e-scooter, rather than the driver who had failed to observe their minimal legal requirement to give way to people on the footpath. Of course it is natural for a grieving parent to think what they could have done differently, it is symptomatic of a concept called "motonormativity" [13], where people have been conditioned to accept driving behaviour that we would not accept in other parts of society. In car-centric, car-dependent societies like ours, even non-drivers exhibit a "pro-driving" bias – you can observe this with the way pedestrians will typically not cross when they legally have priority according to the road rules, even if a driver has stopped to give way.

[13] 'Motonormativity': The bias that leads to dangerous driving

This leads to a culture of subconscious victim blaming when a vulnerable road user is injured or killed in a crash with a motor vehicle. Questions from the public and statements from the police in the media at the time of the crash often implicitly suggest fault or contribution from the vulnerable road user – this may be as innocuous as a plea to wear a helmet or wear bright clothes, even if there's no suggestion the victim was in any way at fault.

The bias is particularly strong when a bicycle is involved, and it seems even stronger still with e-scooters.

It is particularly important for members of this committee and those developing recommendations to be mindful of this motonormativity bias and avoid letting it influence their decision making.

Reducing crash risk with infrastructure

The 2013 Queensland Parliamentary Inquiry into Cycling Issues was held in response to the fatal crash involving Richard Pollett in Kenmore in 2011. Overwhelming evidence was provided in that inquiry that road design and infrastructure was crucial to reduce the risk of cyclist fatalities. Most crashes involving cyclists result from motorist errors, and as mentioned we are unsure what the evidence says about personal mobility device user crashes and whether the trends are similar.

Regardless, what is unquestionably the same between cyclists and e-mobility users is that separation from motor vehicles, or lowering the speed of travel of motor vehicles, results in far lower risk of crashes.

Recommendations from that 2013 inquiry report resulted in the Principal Cycle Network Plan (PCNP), which was developed in consultation between State and Local Governments [14]. These network plans identify the desirable routes for cycling trips across the state.

These routes are equally vital for e-mobility users.

While the plans are sound, implementation and roll out is painfully slow. We estimate that currently about 1km of new infrastructure is provided on the PCNP each year in Brisbane, and at that rate it will take approximately 400 years to be complete.

Brisbane City Council does not refer to the PCNP when making decisions about infrastructure, instead using its Bicycle Network Overlay, which does include some overlap with the PCNP, but not all.

When a particular road upgrade is scheduled by BCC or TMR, and groups like ours provide feedback that it is on the PCNP and requires high quality micromobility

[14] Principal Cycle Network Plans (Department of Transport and Main Roads)

infrastructure, it is often dismissed as the rest of the road is not built to that standard or it is considered "out of scope". Or, inadequate infrastructure like painted bike lanes on a 60km/h road, or narrow 2.5m shared path are suggested, which goes against TMR guidance for selection of cycling tracks [15], and Austroads guidelines – and the project team will state that they aren't using those particular standards.

Road designs that present high risk to micromobility users of all kinds include:

1. Slip lanes
2. Multi-lane roundabouts
3. Roundabouts without prioritised crossings on exits
4. Intersections without pedestrian crossings on all legs
5. Painted bike lanes without physical separation with speed limits 60km/h and over (unable to be used by Personal Mobility Devices)
6. Painted bike lanes that include bus stops and car parking

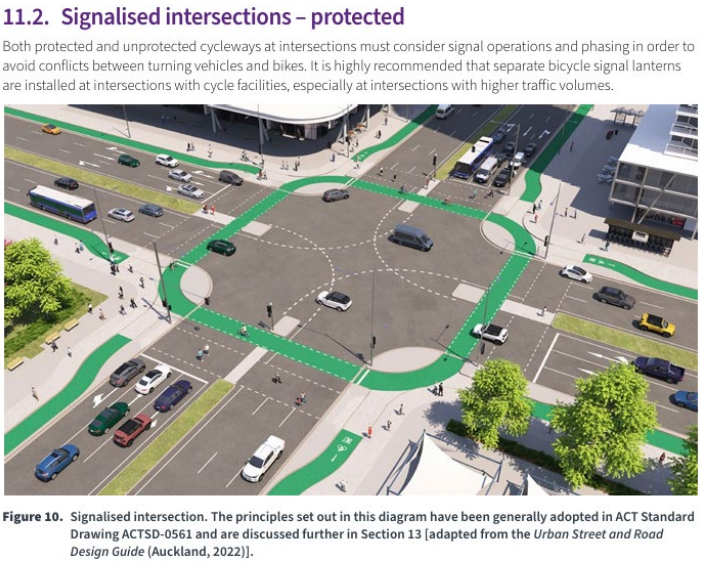
It is a significant oversight that Queensland Road Rules legally allow parking a car in a marked bicycle lane. Other states do not allow this. With PMDs in particular, it creates a dangerous situation where riders have to move into traffic lanes.

None of the arguments against forbidding parking in bike lanes pass the pub test, and we think it is a common sense and easy regulatory change that should happen as soon as possible. **If you can park your car in it, it is not a bike lane!**

A set of standard road and intersection designs is required to ensure consistency and quality across the network. This is similar to the approach used in the Netherlands with their CROW Manual, and a similar approach has recently been adopted by the ACT Government[16].

[15] https://www.tmr.qld.gov.au/_/media/busind/techstdpubs/cycling/selectiondesignofcycletracksguideline.pdf?rev=9983bfc041ec48df92a008054843862d&sc_lang=en&extension=pdf&size=24750162&hash=734E7CB7F4B4795FE0E1C23408D20ED5

[16] New detailed design guide for people-friendly streets and safer intersections - Chief Minister, Treasury and Economic Development Directorate



Sample protected intersection - from ACT Government Design Guide [17]

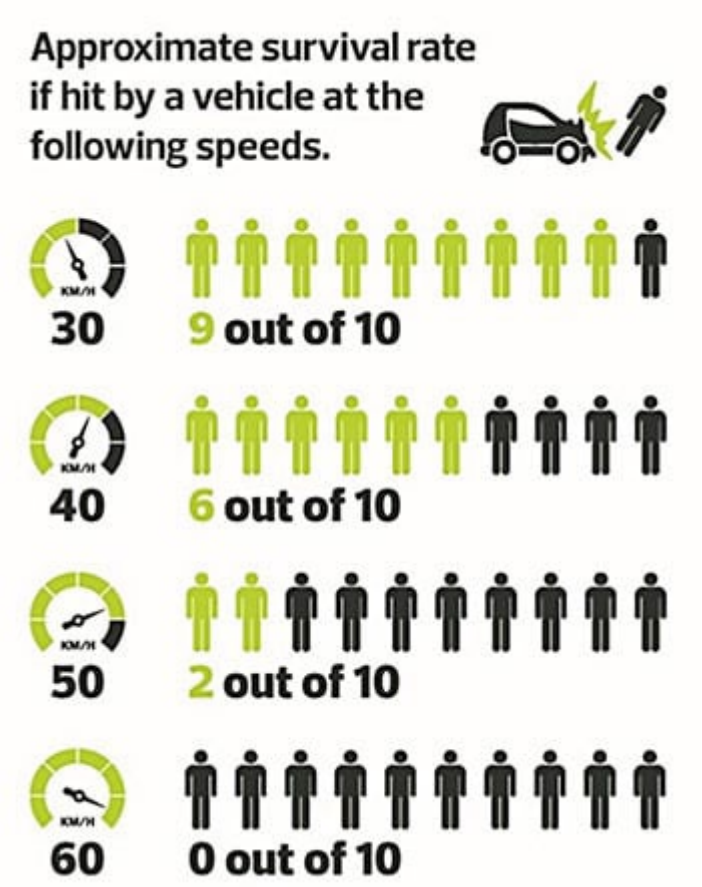
What is also effective in the Netherlands is that engineers face liability if they build infrastructure that does not comply with the CROW. This stops the tendency of leaving out important details for micromobility safety in favour of cost cutting or preferencing motor traffic – which is sadly extremely common in Queensland, as noted earlier in this section. Putting professional responsibility and liability on engineers is vital to achieve better outcomes for vulnerable road users.

Beyond physical infrastructure, the biggest risk is speed. Physical separation is not possible everywhere, and local, lower order streets are ideal for micromobility, be it walking, cycling or e-mobility.

The current 50km/h default speed limit is too high for this to be done safely. It is increasingly being identified as best practice to establish 30km/h or 20mph speed limits on lower order streets. In Brisbane, this would be local and neighbourhood streets.

[17] Design Guide Best practices for urban intersections and other active travel infrastructure in the ACT

At a minimum, school zones should be lowered to 30km/h. This reduces the risk of pedestrian fatalities 4 times from the current 40km/h school zone speed limit.



Safe Speeds – Canadian Association of Road Safety Professionals [18]

Transport for London conducted an extensive study of 150 20mph schemes implemented between 1989 and 2013 and the results were incredible[19]:

- 34% reduction in people killed or seriously injured
- 40% reduction in fatalities
- 75% reduction in number of children killed
- 50% reduction in serious injuries to children
- 35% reduction in collisions for all road users

While a new default lower order speed limit of 30km/h should be implemented, an interim solution lowering the speed limit to 30km/h where lower order streets are on the PCNP, should be straightforward, along with low cost street treatments similar to those being trialled in Toowoomba.

[18] Safe Speeds – The Canadian Association of Road Safety Professionals (CARSP)
[19] Powerful new long-term TfL research shows 20mph speed limits save lives on London's roads - Transport for London

Safe Active Street – Toowoomba Regional Council [20]

Recommendations – Infrastructure Safety

1. Replace the Principal Cycle Network Plan with a Micromobility Network Plan which requires provision for cycling and e-mobility
2. Establish a Standard Design Guide for road and path designs on the Micromobility Network Plan – adapting existing standards from other states.
3. Legislate or regulate Positive Provision, such that Local Government and TMR must meet that standard when delivering any new, upgraded or refurbished works on the Micromobility Network.
4. Enhance the Cycle Network Local Government Grants program to enable local governments to meet this standard.
5. Implement 30km/h default urban speed limits, with an iterative approach:
    a. School Zones reduced to 30km/h
    b. Implement 30km/h on lower order streets on the Micromobility Network
    c. Review outcomes and expand 30km/h to all lower order streets
6. Legislate to prohibit parking in bicycle lanes.

Improving Crash Risk with Behaviour Change

While better infrastructure, physical separation and lower speeds can reduce the risk of crashes of all kinds, individual behaviour and responsibility is key. All road users have responsibility for how they behave on the road, not just in terms of compliance with the road rules but in their awareness and courtesy towards other road users.

One of the key lessons I was taught as a learner driver was be prepared to fix someone else's mistake. We are all human, and we make mistakes, including on the road.

There is also a small proportion of people who behave wilfully recklessly – or as it is often categorised, hooning. The emergence and increasing availability and affordability of high speed devices like electric dirtbikes and e-scooters creates a new means for this kind of behaviour to occur, which sadly puts not only themselves but others at risk of

[20] Toowoomba's new Safe Active Street a first for Queensland

harm. Hooning is still most prevalent with motor vehicles, so methods like licensing and registration have not and will not solve that problem.

But what can be done is a cultural change to how we approach using the roads. As mentioned earlier, Motonormativity is prevalent in Australia, and very often people say "roads are for cars" usually in response to reminders that safe passing laws for cyclists and PMDs exist, or that pedestrians have priority at side streets and slip lanes.

This cultural mindset that car is king has to change.

Just because you have a licence and pay registration does not give you more right or entitlement to the road. In fact, quite the opposite, you obtain a licence and registration to grant you the privilege of operating a motor vehicle on public roads and share them with those who freely use them – pedestrians, cyclists, e-mobility users, horse riders etc.

This entitlement mentality of drivers that they "own the road" and that others are intruders leads to careless, reckless and sometimes intimidatory behaviour by motorists, and this is considered socially acceptable.

All the gear and no idea

One of the challenges that e-mobility presents is that without any experience at all you can hop on a device that effortlessly (or with some pedalling) gets you to 25km/h. E-scooters, e-skateboards and other PMDs have very different handling dynamics to a bicycle. Not being aware or experienced in handling them presents an issue when faced with a potential conflict situation on the road or paths.

This is particularly evident with shared e-scooter users.

Most of us learnt to ride a bicycle with our parents or our friends in the neighbourhood, and had some guidance on how to do so safely – to look for cars, to understand what to do at intersections, to be aware of other people. But because rates of active transport to school have got so low, and so many of our suburbs are hostile to bike riding, there is far less of that natural learning and teaching that goes on.

For many young people, their first experience of the road rules is when they start their Prep-L process to get a learner's permit.

One of the benefits of rapidly rolling out safer speeds and infrastructure in our communities is that parents will feel more comfortable to ride with their children in their local communities, and then feel more comfortable letting them ride independently. **This teaches road awareness.**

Programs like Brisbane City Council's Active School Travel Program are useful behaviour change programs that similarly expose young people to riding on road and path

environments around others. This includes school-based programs where students are taught about road rules and road awareness.

Younger people learning road awareness early leads not only to safer drivers, but also to more prepared users of e-mobility devices. Anecdotally, high school students and university students are prominent users of e-scooters in the western suburbs, and this makes a lot of sense for individual transport.

School-based programs to learn about road awareness in a play based environment should be considered beyond specific Active School Travel programs that are only made available at a limited number of schools for a limited period. Including this as part of the primary school physical education curriculum could be advantageous.

How do you solve a problem like Lime and Neuron?

The overwhelming feedback from our members is that while they see the benefits of shared e-mobility for "last mile" travel, the implementations have arguably introduced more problems than benefits. Some of the problems reported include:

- Hirers are clearly inexperienced and show poor control of their vehicles
- Hirers disregard restrictions about multiple passengers, or age restrictions, parents often hiring scooters for their young children
- Hirers leaving their devices in places that cause obstructions and trip hazards, particularly for those with physical disabilities or vision impairment, or simply blocking kerb ramps that connect paths and roads.
- Hirers "give them a go" in busy areas with lots of pedestrians and commuter cyclists – like having your first driving lesson in peak hour on Moggill Road.
- Companies themselves leaving their devices charged and parked in ways that completely block pedestrian islands and plazas.
- Complete lack of care from Brisbane City Council or the companies in addressing complaints.

Helmet compliance is also observably low with shared devices.

The benefits claimed for these shared programs were that they would reduce car trips including taxis and rideshares in the inner city, but we would question whether this is how it has borne out in reality. Anecdotally, it appears most users of these devices are taking joy rides in the inner city, or using them instead of walking across a bridge between the CBD and South Bank.

As noted earlier, tourists being able to explore the city with e-mobility is a value add to the city, and if the companies have evidence that this is occurring, then that would be useful to understand.

Recommendations and Questions – Behaviour

1. Independent review of shared e-mobility programs across Queensland as part of this inquiry.
    a. Assess the benefits and costs (economic and social)
    b. Compare management of issues like parking and behaviour compliance in different council areas
    c. Provide recommendations and possible regulations at a State level for the governance of these programs.
2. Investigate potential for more school based education programs as part of the physical education curriculum relating to road awareness and road rules
3. Provide better statistical data regarding e-mobility incidents including:
    a. Nature of crash (single vehicle, collision with motor vehicle, collision with pedestrian)
    b. At fault (was it the e-mobility user or another party)
    c. Shared vs private device
4. Public awareness campaign that roads are for people, not cars.

E-mobility ownership – safety (3)

We defer to experts in battery safety, but our members general experience is good quality e-bikes and e-scooters with their own chargers used properly are perfectly safe.

We would object to heavy handed regulation that banned their use, charging or storage in residential, corporate or government buildings and believe that focus is better on tightening import and sale regulations to limit the “cheap and nasty” options flooding the market.

Suitability of regulatory frameworks for e-mobility and e-bikes (4)

Pedelec e-Bike Regulatory Framework

We are satisfied with the current regulatory framework for e-bikes (pedelecs). This regulation has been relatively consistent for a decade with the 25km/h/250W framework and these devices are operating safely and effectively on our paths and roads.

We would caution against tightening these regulations to specific standards and requiring compliance stickers, since manufacturers are found across the world and rely on different standards applications but stick to the 25km/h/250W limitations.

We note that the understanding of the power limit is poorly understood. The regulation states that the maximum continuous output is 250W, but that higher output is allowed intermittently. This is of particular importance to electric cargo bikes that are increasing in popularity as a second family car for carrying kids and shopping. These bikes are heavier in their own right, plus their use case of carrying multiple passengers and heavy loads does necessitate a higher power output on a temporary basis.

Similarly, adaptive e-bikes, e-trikes and recumbent varieties provide mobility and independence to people with otherwise limited physical movement, and as such require higher power devices.

For example, a Bosch Performance Line motor with 85nm of torque has a max output of 600W, but is limited to 250W continuous output and is compliant with Queensland law, and is common on cargo bikes and off road touring e-bikes. However, often manufacturers advertise maximum power output, and this can cause confusion for people purchasing an e-bike, and also cause confusion for regulators and enforcement agencies if they suspect a device is non-compliant.

The power limitation is also largely unenforceable. Testing power output requires diagnostic equipment and running the motor under load, so it's not feasible to be done on the street, and to our knowledge there's no testing done of stock provided by retailers.

The limitation of throttles to 6km/h is low, but also difficult to enforce. Such throttles are important for those heavier cargo bikes to get going where relying on a pedal stroke to get moving can be too difficult.

Most bike shops where e-bikes are sold only sell devices that fit these regulations – however, it is very easy to buy overpowered, overspeed, throttle powered e-bikes online.

We also note that the 25km/h limitation is with assistance. Bicycles can and do roll much faster than that down hill, and this is legal. We note that there is some confusion regarding speed limits for e-bikes as a result of the introduction of speed limits for Personal Mobility Devices. Indeed, media often reports that the 12km/hr footpath speed limit applies to E-bikes[21]. This is not the case. Better public awareness about these regulations is required.

E-scooters and e-bikes must travel at a speed of 12kph or slower on footpaths and 25kph on roads and bike paths.

Children under 12 are prohibited from riding e-scooters or e-bikes with adult supervision required for those under the age of 15.

[21] Four people have died in e-scooter crashes in Queensland so far this year, data reveals - ABC News

Snippet of news item on ABC Brisbane incorrectly stating that speed and age limits apply to e-bikes.

There is some suggestion that increasing the maximum speed to 30km/h in line with the suggested default lower order street speed limit would be appropriate - we would support this, however what's most crucial is there is consistency in these regulations across all states and territories and consistent with world best practice. As such we do not recommend changes at this time.

Pedelecs and bicycles must continue to be exempt from registration or licensing. Pedelecs should also be available to people of all ages as these are vital particularly for secondary school students who often have further to travel to school than in primary school.

Recommendations – Pedelec Regulatory Framework

1. Retain current 25km/h and 250W continuous power output regulations in place
2. Maintain a list of e-bike motor models that are known to comply with regulations to allow buyers to check compliance before purchase
3. Exemption from registration and licensing should continue
4. No age restrictions should be applied to pedelec usage

Personal Mobility Device Regulatory Framework

While we broadly support the maximum speed limitation (25km/h) for Personal Mobility Devices consistent with Pedelecs, we note that this is almost universally ignored by PMD manufacturers and their users.

It is extremely rare to come across a privately owned e-scooter in the wild that is travelling under 25km/h on a road or dedicated bikeway. That may be confirmation bias rather than statistical reality, however, it is extremely easy to purchase an e-scooter that travels faster than 25km/h.

E-bikes on the other hand sold by most reputable bike shops comply with the regulations.

We question whether the 12km/h speed limit for PMDs on footpaths is useful. It is of course sensible to travel at slow speed where pedestrians are present, but this limitation does not apply to bicycles, e-bikes or for that matter, runners.

There is already confusion that the 12km/h limit applies to e-bikes and bicycles as well, and this causes unnecessary tension.

We also believe the restrictions of where PMDs can be used is too limited. It's our view that PMDs should be able to be used wherever bicycles and e-bikes can be used. This would greatly simplify the regulations and enforcement.

PMDs must continue to be exempt from registration and licensing.

Recommendations – PMD Regulatory Framework

1. Support current definition of legal PMDs and speed restrictions
2. Abolish restrictions on roads that they can be used, consistent with bicycles
3. Replace 12km/h speed limit on footpaths with "12km/h speed limit on footpaths while pedestrians are present"
4. Exemption from registration and licensing should continue

New category – Speed Pedelec/Moped

The Netherlands has an additional category of device called Speed Pedelec and Moped, which also encapsulates faster e-scooters. This includes:

- Maximum speed of 45km/h
- Not permitted on dedicated bike paths, footpaths or shared paths
- Must have a driver's licence
- Must be registered

Currently Queensland doesn't have a Moped category of registration, and motorcycle registration requires a Vehicle Identification Number. Off road recreational motorbikes can receive a conditional registration.

Mopeds are already restricted in use, unable to use motorways, and have a maximum speed of 50km/h.

We believe this is an appropriate category for the currently illegal electric motorbikes, high speed e-scooters and overspeed and throttle-controlled e-bikes. We believe it could make a category for moped registration that sits in a cost range in between conditional registration and full motorcycle registration.

Electric dirt bikes should be added to the list of off road recreational vehicles able to receive conditional registration.

We believe the extra obligations required to register these higher speed vehicles will be a deterrent from purchase, and provide an easier means for police to prosecute their use.

Recommendations – Moped Regulatory Framework

1. That TMR investigates creation of new category of vehicle and registration "Moped", to incorporate existing mopeds distinct from motorcycles, along with electric motorbikes, fast ebikes (up to 50km/h) and fast e-scooters (up to 50km/h).
2. If feasible, TMR to legislate this category that allows them on road, but not on footpaths, shared paths or dedicated bike lanes or paths.

Effectiveness of current enforcement approaches (5)

The general perception of our members is that enforcement is largely non-existent on:

- Use of illegal electric motorcycles (and petrol dirt bikes)
- Speed restrictions of PMDs
- Behaviour of shared mobility users

The only noticeable enforcement occurs with arbitrary blitzes, usually at busy places like the Bicentennial Bikeway, Goodwill Bridge and Kurilpa Bridge, which are good for show but ineffective at changing problematic behaviour. It's particularly ineffective when the rationale is to protect pedestrian safety, but people are being stopped when there are no pedestrians nearby.

We understand from local police that there are instructions to avoid chasing young people on these high speed devices because of the significant risk of causing a crash, and we respect that public safety is prioritised over enforcement. However, the reckless and illegal use of electric motorcycles on bike paths and particularly shared paths through parks in the western suburbs is a constant and strong theme of feedback our members have provided us.

We believe there should be more enforcement on Queensland-based retailers knowingly selling illegal devices that will be used inappropriately on roads and paths. Online interstate and international dealers and second-hand sales are of course another, complex issue.

Enforcement of users should focus on the clearly reckless, dangerous and antisocial behaviour when it is observed. Arbitrarily policing 25km/h speed limits and presence of bells or helmets does nothing to prevent that behaviour.

We believe that penalties for crashes caused by reckless behaviour, particularly where an unregistered or illegal device is involved, are sufficient – they just need to be applied.

Our view broadly is that fines and enforcement are less crucial for changing behaviour than having the proper infrastructure and education in place. Just as you can't engineer out stupid, you also can't fine it out of people.

Gaps between Commonwealth and Queensland laws (6)

The definitions of devices and laws around their use are different in every state and territory. They are unworkable.

There needs to be coordination at a national level to get an agreed set of regulatory settings for:

- Pedelecs
- PMDs
- Mopeds

And apply those consistently from state to state. As it stands, someone can buy a PMD in Coolangatta and be immediately breaking the law when they cross into Tweed Heads. It is nonsense.

Communication and education (7)

As noted earlier, Queensland has a terribly strong motonormativity culture. Communication and education has to extend far beyond just what is and isn't legal related to e-mobility but our entire culture around transport and getting around, and particularly our relationship with speed and impatience.

Queensland needs to embrace the road user hierarchy that puts vulnerable road users first.

This is the approach that is being taken in the UK, and this is resulting in better safety outcomes and improvement to the road culture. Though they still remain similarly culturally biased towards driving, the culture is shifting, and the surveyed popularity of Low Traffic Neighbourhoods and 20mph zones belies the shock jock media narratives that claim otherwise.

Modal priority - European Transport Safety Council [22]

All public awareness campaigns need to be based on this philosophy.

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[22] UK puts vulnerable road users first in new highway code - ETSC