

Inquiry into e-mobility safety and use in Queensland

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Submission to the State Development, Infrastructure and Works Committee

Inquiry into E-Mobility Safety and Use in Queensland

On behalf of the Brisbane South 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 southern 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.

Bicycle user groups support people of all skill levels and ages to use active transport as a healthy, efficient, environmentally friendly and enjoyable way to get around. It is a relatively low cost and zero emission form of transport. We believe these new forms of active transport are to be celebrated but must come with a framework that ensures the safety and consideration of all active transport users.

Whether it be manual bicycle riders, pedestrians, drivers or e-mobility device users, everyone should be able to:

- understand the legal rights and obligations that associate with their method of transportation
- only have access to legally imported and safety proven devices
- expect appropriate enforcement and removal of illegal devices
- have access to appropriate infrastructure that encourages active transport use and provides appropriate segregation where necessary to facilitate the safety of all users.

Clarification of terms used:

When we discuss E-Mobility in this submission, I am referring to the current legal devices as detailed by the Queensland Government on the [qld.gov.au/transport](https://www.qld.gov.au/transport) website

E-bikes – <https://www.qld.gov.au/transport/safety/rules/wheeled-devices/electric-bicycle-rules>

For an electric bike to be legally used on the road, it must have an electric motor and be one of the following:

- A bicycle with an electric motor or motors capable of generating no more than 200 watts of power in total, and the motor is pedal-assist only.
- An electrically power-assisted cycle is a bicycle with an electric motor capable of generating up to 250 watts of power, but the motor cuts out at 25km/h and the pedals must be used to keep the motor operating. Electrically power-assisted cycles must comply with the European Standard for Power Assisted Pedal Cycles (EN15194) and must have a permanent marking on it that shows it complies with this standard.

PMD's – <https://www.qld.gov.au/transport/safety/rules/wheeled-devices/personal-mobility-devices>

In Queensland, a personal mobility device must:

- be designed for use by one person only,
- fit the following dimensions: 1,250mm long by 700mm wide by 1,350mm high or 700mm long by 1,250mm wide by 1,350mm high
- have a maximum weight of 60kg when not carrying a person or load
- be powered by an electric motor
- have 1 or more wheels.

1. Benefits of e-mobility (including both Personal Mobility Devices (PMDs), such as e-scooters and e-skateboards, as well as e-bikes) for Queensland;

E-mobility presents a significant opportunity to enhance urban transportation by improving first-and-last mile connectivity, reducing traffic congestion, and providing a sustainable, cost-effective alternative to private car use. Devices like e-bikes and e-scooters fill critical gaps in the public transport system, offering efficient, flexible travel options, especially during peak times. They help reduce emissions and improve air quality while causing less wear on road surfaces, potentially lowering long-term infrastructure maintenance costs. Additionally, e-mobility offers an inclusive transport solution for those unable to drive, including younger people, older adults, and individuals with disabilities, all while reducing the financial burden of car ownership and cost-of-living pressures.

Bicycle User Groups encourage all forms of **active transport** due to the benefits as outlined below:

- improved physical and mental health of e-mobility users including connection to nature, community and local businesses
- reduction in health costs to society
- positive flow on effects to the economy via the active transport industry, retail and hospitality industries, tourism industry etc
- positive environmental outcomes via lower emissions
- contribution of e-mobility devices to lower congestion on streets and roads and less wear, tear and damage to road infrastructure
- reduced demand for traffic lanes and parking
- reduced demand for public transport, particularly during high demand times.

2. *Safety issues associated with e-mobility use, including increasing crashes, injuries, fatalities, and community concerns*

Lack of separate infrastructure that e-Scooters and e-Bikes can use – when sharing with manual bikes and other non-motorised vehicles, the speed differential can be acute when e-mobility devices are operated in excess of 25kph. This leads to real and perceived safety issues for those people not on e-devices.

Having e-scooters on footpaths is a real safety concern – but specifically for the private devices where speeds are frequently much higher than allowed speed limits. This

behaviour is however the result of a lack of infrastructure where e-scooters can legally be ridden, causing potential conflicts where they do ride on shared footpaths and bikeways.

The lack of allocated parking bays for rental e-scooters and bikes creates safety concerns and issues for footpath and bikeway users where devices are frequently left in unsafe and inconsiderate locations which impact on other users.

The increased use of illegal e-motorbikes and other high-powered devices are a serious safety concern. These vehicles are being predominantly ridden illegally by juveniles without licensing or education in their operation or safety. They are being ridden at excessive speed on bike paths and on roads where they create safety concerns and risks for other path/road users.

Strategies to address these issues include:

- Safer Infrastructure
 - Protected bike lanes that are separated from both traffic and parked cars.
 - Bike-priority intersections: Use of coloured road surfaces, advance stop boxes, and dedicated bike traffic signals.
 - Connected cycling networks: Ensure continuous, direct bike routes without sudden ends or dangerous detours while linking up existing paths and lanes for easy transitions.
 - Wider, well-maintained footpaths: Safe for people of all ages and abilities with markings separating slower moving pedestrians from faster moving e-mobility and bikes.
 - Raised or signalised pedestrian crossings: Increases visibility and slows vehicle traffic.
 - Traffic calming: Speed humps, narrowed roads, and pedestrian refuge islands reduce vehicle speed in mixed zones.
- Improved Regulation and Enforcement
 - Lower Speed Limits: Reduce 50km/h speed limits to 30 km/h in areas including CBDs, school zones, entertainment and residential streets.
 - Stronger Enforcement: Increase penalties and improve community reporting mechanisms for dangerous or aggressive driving behaviour.
 - Import regulations to prevent non-compliant device importation.
- Public Education and Awareness
 - Targeted safety campaigns: Promote awareness of shared space etiquette, right-of-way rules, and responsible behaviour for all road users.
 - School programs: Introduce pedestrian and cycling safety education from an early age.
 - Driver awareness: Campaigns for motorists on how to safely interact with cyclists and pedestrians (e.g., “1.5m passing rule”) as an addition to demerit points and fines.
- Supportive Policy and Urban Design

- Design communities where walking and cycling are natural and safe choices.
- Prioritise vulnerable users: Shift planning and funding priorities towards non-motorised users.

3. Issues associated with e-mobility ownership, such as risk of fire, storage and disposal of lithium batteries used in emobility, and any consideration of mitigants or controls

It is anecdotally understood that the fire and other issues associated with batteries are constrained to the importation of cheap devices from overseas. If the importation of cheap batteries and devices which do not meet the regulatory standards was controlled this issue may well disappear.

Mitigation Strategies:

- Adopt import and manufacturing safety standard UL 2849. This is standard is currently a voluntary e-bike battery safety standard that demands strict testing requirements to prevent incidents due to electrical, mechanical, and fire hazards. The standard covers more than just the e-bike's battery — it evaluates the functional safety of the entire e-bike system.
- Launch public education campaigns on safe charging, handling, and maintenance of e-mobility devices.
- Support the development of secure, ventilated charging stations in apartment blocks, workplaces, and public infrastructure.

4. Suitability of current regulatory frameworks for PMDs and ebikes, informed by approaches in Australia and internationally

Regulation of e-scooters and e-motor bikes in Australia is piecemeal and inconsistent between states. This is a classic example of where regulation on import, standards and operation of devices should be national or consistently applied across states.

Import regulations should require all e-bikes to comply with the already nationally recognised standards EN15194 and UL2849. All states should adopt these standards to keep uniformity and consistency across all regions simplifying enforcement, and community education.

- EN 15194 is a standard that specifies requirements and test methods for the safety, performance, and design of e-bikes before they are deemed safe for riders and the public. It's especially developed for regulating e-bikes in European Union countries, and covers common hazards and hazardous events related to e-bikes. In most of Europe, manufacturers are not obligated to comply with EN 15194—the UK and France being exceptions, where compliance with the standard is mandatory. When an e-bike is indicated as meeting the EN 15194 standard, this means it also meets the standards for mechanical parts set forth in ISO 4210. Furthermore, it has passed comprehensive safety assessments that test and evaluate major areas of the bike including its braking performance, electrical system safety, stability, and durability, making it less at risk of accidents and malfunctions, which in turn promotes rider and road user safety. EN 15194 also ensures that the e-bike meets certain performance criteria to deliver a consistent and reliable riding experience by subjecting the e-bike to testing that evaluates parameters such as power assistance levels, speed limitation, and range estimation.

- The UL 2849 standard evaluates the entire e-bike electrical system, including the motor, display unit, cables and wirings, battery, and charger, by testing the said components for fire, electrical, and mechanical safety—alone as well as in combinations with one another. Developed by Underwriters Laboratories, a global leader in safety science that focuses on product safety testing and certification, UL 2849 is a big step up from UL 2271, another standard often referred to by micromobility device manufacturers. The latter solely evaluates components that make up the battery, rather than the entire e-bike system. Due to its thoroughness in testing all electrical components involved, UL 2849 is considered the gold standard for e-bike system safety. In most markets, bike makers are not required to use e-bike systems that meet the UL 2849 standard, but there's been an increasing call amid fires caused by lithium batteries of micromobility vehicles to make UL certification compulsory

Regulating to mandate these two standards across all e-mobility devices will eliminate the importation of low quality devices which anecdotally result in increased risk of fire as well as non-compliant use due to excessive speed and power.

5. Effectiveness of current enforcement approaches and powers to address dangerous riding behaviours and the use of illegal devices;

Queensland has laws around the use of PMDs however there seems to be little effort by the Department of Transport and Main Roads or the Qld Police Service to enforce the regulations. Our enforcement agencies may benefit from further education to identify what devices are non-compliant, and for more resources to be allocated and prioritised to address the issue.

e-Mobility dealers and maintenance providers should be compelled to refuse to support non-compliant devices. These businesses should be subject to random inspections and enforcement proceedings if they are found to be providing services, software or hardware that enable the derestriction of speed limiters, or components that result in the e-device becoming non-compliant with national regulatory requirements.

Riding behaviours by a small minority of users are dangerous and are undertaken using illegal devices – perhaps an education program for offenders and confiscation of devices like occurs with motor vehicle anti hooning legislation in some states. Once again, this needs to be implemented across all states in a consistent approach to simplify community education. In addition to the offender receiving the consequences, if they are a juvenile their parents should also be held accountable with penalties applicable who supply the e-device to the minor.

6. Gaps between Commonwealth and Queensland laws that allow illegal devices to be imported and used

The Commonwealth government should manage the prevention of non-compliant e-devices at the border. i.e. eliminate the importation of non-compliant e-devices and components that comprise the hardware to enable consumers to de-restrict devices that were purchased as compliant devices.

Queensland retail laws seem to enable businesses to supply e-devices that are not compliant with Australian regulations. Retailers allegedly inform the customer that the device can only be operated on private property, whilst seemingly knowing that it will not be constrained to private property. This needs to change and retailers and service providers should be compelled not to provide product or services which that enable the derestriction of speed limiters of components that e-device becoming non-compliant.

7. Communication and education about device requirements, rules, and consequences for unsafe use

Education is critical to making sure people of all ages and skill levels understand where they can legally ride, how to ride safely, the risks of unsafe riding, and how to share paths and public spaces with others safely and respectfully.

Currently there is little communication or education about device requirements, rules etc. Unlike motor vehicle licensing where there is education about road rules and a test that must be passed, under 18s can be riding high powered illegally operated e-motorbikes and e-scooters without any education or assessment, including about road rules, safety or the consequences of dangerously operating the device.

Education programs could enhance public awareness of the requirements, rules and consequences could be delivered via multiple pathways including:

- School based rider education programs
- Media based rider awareness initiatives
- Parental awareness information included in rates and registration renewal mail outs

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