

Transport and Other Legislation (Managing E-mobility Use and Protecting Our Communities) Amendment Bill 2026

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Proposed Queensland e-bike laws risk undermining safety, health and evidence-based transport policy

Queensland's proposed regulatory response to e-bikes appears driven by understandable community concern about injuries and illegal high-powered devices. However, if the objective is genuinely to reduce deaths and injuries, improve public health, and follow international best practice, the current direction risks missing the real causes of harm while creating unintended negative consequences.

1. Safety, injury and death prevention must focus on real risk factors

If the primary goal is injury prevention, policy must be directed at the factors that actually cause serious harm. The strongest predictors of cyclist fatalities are well established: **speed differentials** between bicycles and motor vehicles, unsafe road environments, and the mixing of vulnerable riders with high-speed traffic. Measures that push legitimate e-bike riders off shared paths and onto roads may paradoxically increase risk rather than reduce it.

There is also a **critical regulatory distinction** that must be maintained between compliant pedal-assist e-bikes and throttle-controlled electric motorbikes. These are not the same devices. Pedal-assist e-bikes are assist speed-limited, require human effort, and behave like bicycles. By contrast, throttle-controlled devices that operate like motorcycles should simply be regulated under existing motorcycle laws rather than creating new layers of regulation for low-risk vehicles.

Licensing schemes may appear attractive as a simple accountability measure, but there is little evidence they improve safety outcomes for bicycles or low-speed micromobility devices. Most incidents arise from infrastructure limitations, congestion, visibility and behavioural factors rather than a lack of knowledge of road rules. Education has value, but licensing systems primarily test theoretical knowledge and do little to influence the situational judgement that actually prevents crashes.

If governments are serious about safety, the evidence consistently points toward safer infrastructure, clearer device classification, and enforcement against illegal high-speed electric motorbikes—not additional bureaucracy for riders of compliant bicycles.

2. Active transport delivers major health benefits that should not be undermined

E-bikes should also be viewed through a public health lens. They are not simply transport devices; they are **health interventions**.

Pedal-assist cycling enables older riders, people with joint problems, and those recovering from illness to remain physically active when conventional cycling might not be possible. It allows families with differing fitness levels to ride together safely. It enables longer commutes without excessive fatigue, making cycling a realistic alternative to car travel.

These benefits translate directly into reduced cardiovascular disease risk, improved metabolic health, better mental health, and reduced health system costs. Governments routinely spend large sums trying to increase physical activity in the population. E-bikes are one of the few interventions that achieve this naturally by embedding exercise into daily life.

Over-regulation risks discouraging exactly the kind of transport behaviour governments claim they want to encourage: reduced car dependence, lower emissions, less congestion, and healthier communities. Any policy that creates unnecessary barriers to safe, low-speed active transport should be examined very carefully against these broader societal benefits.

3. High-cycling countries show what actually works

Perhaps the most important lesson comes from countries with the **safest active transport** environments in the world: the Netherlands, Denmark, Germany and France. These nations have extensive experience managing large numbers of cyclists and e-bike users and pedestrians across all age groups.

Their approach is notably consistent:

- Compliant pedal-assist e-bikes are treated as bicycles
- Licensing is not required
- Infrastructure is prioritised
- Faster motor-driven devices are regulated separately
- The promotion of mutual respect since most drivers are also cyclists

For example, the rate of **cyclist death** in Australia is **4 times the rate** per km cycled than that of the Netherlands. These countries achieve safety not through licensing schemes and helmet laws (helmets are worn on less than 5% of cycle journeys in the Netherlands) but through good design: separated cycling infrastructure, predictable road environments, and policies that encourage participation rather than restrict it.

It is also notable that many jurisdictions have previously experimented with bicycle licensing and abandoned it because it was expensive to administer, difficult to enforce, and produced little measurable safety benefit.

A better path forward

If Queensland wishes to improve safety outcomes while supporting health and mobility, a more effective approach would include:

- Clear enforcement against illegal throttle-controlled electric motorbikes
- Maintaining the classification of pedal-assist e-bikes as bicycles
- Investment in safety infrastructure (separated cycleways, properly designed shared paths)
- Targeted education rather than licensing
- Proportionate regulation based on actual risk

Good transport policy is not about appearing tough. It is about being effective. The evidence suggests that focusing regulation on genuinely dangerous devices while supporting safe active transport offers the greatest benefit for safety, health and community wellbeing.

Queensland has an opportunity to get this right by following evidence rather than reaction.

The **files discussing the specific Recommendations** with suggestions for better alternatives are attached to this submission.

About the writer

By way of background, I am a retired Rural Generalist Medical Practitioner with extensive Emergency Medicine experience, where I have had direct exposure to trauma presentations and the factors that influence injury risk.

I am also an experienced long-distance touring cyclist, having completed more than twenty tours each exceeding 2,000 km in Australia, and a number of countries in Europe and South East Asia. I no longer tour in Australia owing to the lack of safety on our roads.

My most recent tour involved the use of a European-standard compliant pedal-assist e-bike in the French Alps, providing direct experience of their performance, safety characteristics and role in enabling participation while cycling in challenging terrain. While I do not currently own an e-bike in Australia, this practical exposure has informed my understanding of their appropriate use and risk profile.

My interest in this issue is to support the development of legislation that improves safety outcomes while avoiding unintended consequences that will increase exposure to higher-risk transport environments and discourage beneficial forms of active transport.

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What is an E-Bike?

- an E-bike is a Pedelec, the motor only provides assistance when pedalling*
- a 2 wheeled machine controlled by a throttle is a **Motorbike**, not an E-bike
- a 3 or 4 wheeled machine with a maximum speed of 6km/hr is a mobility device

Why an E-bike can go faster than 25km/hr (and still be legal)

First: the key rule, the critical distinction

A legal Pedelec does **not** have a speed limit

It has a **motor assist speed limit of 25km/hr**.

The law says:

The motor must stop helping at 25km/hr. It cuts out at 25km/hr.

It does **not** say:

The bicycle cannot go faster than 25km/hr.

This is the biggest misunderstanding.

The 3 Sources of Power on an E-bike

An E-bike can move because of 3 completely separate sources of power

1) Motor power (limited)

This is the only regulated part

- Assistance cuts out at 25km/hr
- Only works while pedalling
- Maximum Continuous Rating usually 250W*

This is **assistance power**, not propulsion power

Think of it as:

Power assistance like Power Steering

*In some circumstances, higher power is required - eg. cargo bike ferrying children, delivery E-bike - the principle remains irrespective of the power of the the motor; it is only engaged by pedalling and the motor cuts out at 25km/hr

2) Human power (unlimited)

The rider is not limited.

Humans can produce:

Gentle riding	->	75-120W
Normal riding	->	120-200W
Fit riders	->	200-300W
Short bursts	->	much higher

An elite cyclist on a modern lightweight bicycle can maintain speeds above 50km/hr for long periods, above 60km/hr when riding in a peloton, in formation.

This power has **no legal limit** because it is human.

So above 25km/hr, an E-bike is just a normal bicycle with **no motor assistance**

3) Gravity (potential energy)

Most people forget this.

When descending, gravity supplies energy. Any normal cyclist can exceed 25km/hr when descending.

Tour de France cyclists descend at speeds in excess of 70km/hr without motor assistance.

Once more, an E-bike behaves like a normal bike (no motor assistance) when descending faster than 25km/hr.

There is no speed limitation to gravity.

The Simple Explanation

Think of an E-bike like this:

Below 25km/hr:

Human power + Motor + Gravity

Above 25km/hr:

Human power + gravity

The motor simply cuts out.

Nothing else changes

A Very Useful Real World Comparison

Typical Speeds:

Casual cyclist	->	15-20km/hr
Normal commuter cyclist	->	20-28km/hr
Fit road cyclist	->	30-40km/hr
Peloton (formation)	->	50-60km/hr

An E-bike just helps more people ride in the normal commuter range and makes riding to the shops, up hills, to work etc possible for a large number of people who could not do this on an unassisted bicycle.

Why Higher Motor Power does NOT Increase Speed

Because the motor controller simply cuts the motor when the speed reaches 25km/hr

Example:

A rider reaches 25km/hr

Motor stops assisting.

Even if the motor *could* produce more power, it is electronically prevented from doing so.

More Motor Power **DOES NOT EQUAL** More Speed

It only means:

- easier hill climbing at less than 25km/hr
- easier acceleration, especially in traffic, therefore safer
- better load carrying allowing parents to ferry young children, parcel delivery

This is particularly relevant for:

- 1) cargo bike riders delivering infants and young children to childcare, kindergarten and primary school - this is very common in those European countries where safe cycling infrastructure encourages active transport and discourages Toorak taxis
- 2) parcel and food delivery riders who use E-bikes to make a living

For these categories of E-bike cyclists, 250W continuous may not be sufficient but it does not matter if they have more powerful motors because **THEY CANNOT EXCEED 25KM/HR WITH MOTOR ASSISTANCE!**

This is completely different to the E-motorbikes which do NOT have speedlimiters, which are throttle activated, and which, in the hands of teenagers, have caused so much harm. These motorbikes need to be removed from our roads and pavements or be registered, meet roadworthy requirements, and have licensed riders.

*Some legal E-bikes with 250W continuous rated motors have a throttle with a maximum speed of 6km/hr for the purpose of assistance when walking an E-bike. Owing to bicycle physics, < 15km/hr is not a safe continuous cycling speed for most people. Most Pedalec E-bikes do not have a throttle.

Why a "250W" E-bike motor can produce more than 250W

Why it Matters

The **250W** rating is **continuous power**, meaning:

The power that the motor can safely produce all day without overheating.

This is currently the law here and is the law in Europe.

It does **NOT** mean: maximum possible power

A simple analogy:

A small car engine may be rated at 80kW but when you accelerate, the motor will produce much more than 80kW for a brief time. It will also produce more when climbing a steep hill.

Another analogy:

A person can walk all day at low effort

They can briefly lift a heavy weight requiring a large increase in momentary effort

The lifting power is much higher but not sustainable

Motors behave the same way

Why Peak Power is Necessary

If a motor, as per the Parliamentary Committee's recommendation were limited to 250W maximum at all times, E-bikes would actually:

- be impossible to start uphill
- be unstable at low speed, especially when ridden by less confident cyclists
- be unsafe with human or other cargo
- be quite awkward to ride
- put all currently legal E-bikes off the roads and footpaths

Short bursts of higher power allow smooth operation.

Typical examples where higher power is needed:

- starting from traffic lights
- starting uphill
- very steep inclines -15-20% - of which there are numerous examples in Brisbane
- pulling loaded trailer, cargo bikes
- riding into the wind
- recovering from low speed (after slowing for a pedestrian on a shared path)

A Practical Example

Starting on a 10% gradient with groceries:

Rider produces: 150W

Motor continuous: 250W

Total: 400W

But this is not enough to get the E-bike and rider moving up the incline so the motor briefly produces 500W to get moving - once moving, the power quickly drops back

This is exactly like pushing a heavy trolley - starting is much harder than rolling

2 limits remain:

- the motor stops assisting at 25km/hr
- peak power lasts only briefly

-> so the motor helps overcome resistance, not create high speed

Cargo bikes:

- may weigh 150-250kg
- without higher power they would wobble or stall starting

Peak Power improves:

- stability
- safety
- control

- NOT speed

250W describes how much the motor can sustain

Peak power describes how much help it can give you when needed briefly

This is normal engineering, not a loophole

The Important Safety Point

The speed limiter exists because, as everyone knows, the risk of accident and injury increases rapidly with speed.

By stopping motor assist at 25km/hr, irrespective of the power of the motor, the E-bike stays in the same speed range as a normal bike ridden by a moderately fit rider. It makes cycling safer and more accessible to less strong riders for everyday transport needs.

This is why a legal Pedalec E-bike is treated like a normal bicycle.

**An E-bike does NOT create speed.
It reduces effort.**

**It is not a faster bicycle.
An E-bike is a bicycle that makes hills flatter.**

Recommendation 4

That the Queensland Government embed e-mobility into strategic transport infrastructure planning and work with local governments to achieve greater investment and delivery of high quality, connected and separated pathway networks.

Alternative Recommendation 4

*That the Queensland Government recognise **injury-prevention infrastructure** for vulnerable road users as a core component of strategic transport planning, and support local governments to deliver this through investment in high-quality, connected and separated cycleways and shared pathway networks that reduce conflict between pedestrians, cyclists, e-mobility users and motor vehicles.*

**“Safe cycleways are NOT cycling projects
— they are injury-prevention infrastructure.”**

1. Transport issues facing our communities

- Rising vulnerable road user injuries
- Ageing population mobility needs
- Congestion growth
- Rising infrastructure costs

Cycleways are one solution.

2. Focus on Safety

- Mixing fast vehicles with vulnerable users increases injury risk
- Separation is standard engineering practice
- We separate pedestrians from cars already
- Cycleways apply the same principle

“Separation is the most reliable way to reduce serious injuries.”

3. Cost efficiency

Comparison example:

<u>Road widening:</u>	Very expensive Land acquisition required High maintenance
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<u>Cycleways:</u>	Relatively low cost Minimal land requirement Low maintenance
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“Cycleways are one of the lowest-cost ways to increase transport capacity.”

4. Capacity

<u>Cars</u>	space inefficient
Traffic lane:	600–1000 people/hour

<u>Bicycles</u>	
Cycleway:	2000–5000 people/hour

Cycleways move people, not vehicles.

5. Ageing population

Many older people stop driving before they lose mobility.
Safe cycling extends independence.

“Safe cycling allows older residents to remain mobile without driving.”

There is very good evidence for this from the European countries where bicycle trips far outnumber car journeys

6. Public health

Inactive populations cost health systems heavily.

Cycling:	Reduces chronic disease
	Improves mental health
	Reduces healthcare costs

“Active transport and safe cycleways are preventive healthcare infrastructure.”

7. Business

Research shows:

Cyclists:	Visit local business more frequently
	Spend locally
	Support main streets

“Safe cycling increases local economic activity.”

8. The NIMBY issue

Common fears:	Parking loss
	Traffic impact
	Anxiety which arises from change where you live
	- these are legitimate fears

Path to resolution:	Pilot projects
	Measured outcomes - need to address concerns
	Reversibility

“We can trial and evaluate before permanent changes.”

9. Width and space objections

Street space is allocated, not fixed.

Example:

One car lane $\approx$ two protected cycle lanes.

“This is a design choice about how we use public space.”

10. Construction disruption

Reality: All transport improvements cause temporary disruption.

“Short-term disruption for long-term safety improvement.”

This is already accepted for roads, and so equally for cycleway construction

11. Equity

Many people cannot drive:

Youth
Older adults
Some disabilities
Lower income residents

- yet enormous amounts of tax money from general revenue are spent on infrastructure for cars which they cannot benefit from

“Safe cycling improves transport equity.”

12. Air Quality

5000 cyclists per hour produce next to zero pollution compared to 200-400 cars (exhaust gases, brake and tyre particles in the air) passing through the same space

13. Enforcement reality

Enforcement of bad driver/cyclist/pedestrian behaviour cannot compensate for unsafe design.

“Good design reduces the need for enforcement.”

14. Liability

Councils:

Duty of care
Known risks
Safe design standards

“Where safer design solutions exist, continuing unsafe layouts may create governance risk.”

15. Internationally

Most cities expanding safe cycling infrastructure are doing so because:

- It works
- It reduces injury
- It improves mobility

There are now more bicycle trips in London than there car journeys every day. The city of Seville in Spain has transformed itself from a completely non-active transport culture to where today, bicycle trips far outnumber car journeys in the city.

“This is established transport practice internationally.”

Safe cycleways deliver:

- Fewer injuries**
- Lower infrastructure costs**
- Better mobility**
- Health benefits**
- Economic activity**

It should be not whether we build them, but where and when.

What advocates for safety infrastructure are up against

The 5 arguments that derail cycleway proposals

1. “There aren’t enough cyclists to justify it”

This is the most common objection and sounds logical.

It is flawed

Safe infrastructure usually **precedes usage**, not follows it.

Example most people understand:

- You don’t build a bridge **after** people start swimming across a river.
- You build it so people **can** cross safely.

Transport planning calls this:

Induced demand.

“Many people will not cycle until it is safe. Usage reflects safety, not just demand.”

Research consistently shows:

About 50–70% of people fall into the category:

"Interested but concerned."

Low numbers are a design failure, not lack of interest.

2. “Cyclists don’t pay for roads”

This is emotionally powerful but factually weak.

It is flawed

Roads are funded mainly from:	General taxation
	Rates
	GST
	Income tax
	Not just fuel excise

Most cyclists:	Also own cars
	Also pay taxes

“Road funding is based on community benefit, not mode-specific fees. Footpaths are not funded by pedestrian licences either.”

“Cycling infrastructure costs far less per user than road infrastructure.”

3. “Cycleways remove parking and hurt business”

It is flawed

Research most often shows:
Retail benefits from increased active transport.

“The goal is not removing parking. It is making the street safer and more accessible.”

Pilot projects
Monitoring
Adjustments

“Simply measure business impact before making permanent changes.”

4. “Cyclists don’t follow the rules anyway”

It is flawed

All transport modes have rule violations.
- but behaviour improves with good design.

Transport engineering principle:
- people follow systems that are intuitive.

“Safe infrastructure improves behaviour because it reduces conflict.”

“When people feel safe, they behave more predictably.”

5. “This is a waste of money compared to roads”

It is flawed

This sounds fiscally responsible

- but cycleways are extremely cheap compared to roads

Urban road widening: \$5–20 million/km

Protected cycleway: \$0.5–3 million/km, maintenance much lower

“Cycleways are one of the cheapest ways to increase transport capacity.”

Recommendation **5**

That the Queensland Government advocate for local governments to provide dedicated parking for e-mobility devices in appropriate designated areas, as determined by the local government or on private property where applicable.

Alternative Recommendation 5

*That the Queensland Government advocate for local governments to provide **secure** dedicated parking for e-mobility devices in appropriate designated areas, as determined by the local government or on private property where applicable.*

Comment on Recommendation 5

The inclusion of **secure** dedicated parking is important given the well-recognised high rates of bicycle and e-bike theft. E-bikes are particularly attractive theft targets due to their higher value, removable batteries, and resale potential. Without secure parking, the risk of theft may discourage use and undermine the effectiveness of policies intended to promote e-mobility and active transport.

Secure parking should therefore be considered an essential supporting element of e-mobility infrastructure rather than an optional enhancement. Providing well-located, visible and secure parking areas can:

- Reduce theft risk
- Improve user confidence
- Support uptake of e-mobility as a transport option
- Protect significant personal investment by users

This aligns with established transport planning principles that supporting infrastructure must address not only movement but also the safe storage of vehicles.

Recommendation 11

That the Queensland Government update state legislation to provide that all e-mobility devices with an electrical power source be defined as a ‘motor vehicle’, to simplify enforcement.

Alternative Recommendation 11

That the Queensland Government update state legislation to provide for:

- *the distinction between pedal-assist e-bikes and motor vehicles*
- *consistent alcohol limits for all vehicle operators to simplify enforcement*
- *The use of a clear functional criterion, speed-limited pedal assist activation versus throttle activation, to distinguish devices with an electrical power source and thus simplify enforcement*

Why Recommendation 11 is a flawed regulatory solution

Recommendation 11 proposes defining all e-mobility devices with an electrical power source as “motor vehicles” to simplify enforcement. While administratively simple, this approach fails because it substitutes classification convenience for regulatory accuracy, ignores well-established technical distinctions between vehicle types, and creates unintended legal inconsistencies.

1. It confuses motor assistance with motor propulsion

The recommendation fails to distinguish between:

- **Motor-assisted vehicles** (for example compliant pedal-assist e-bikes where human effort is primary)
- **Motor-propelled vehicles** (for example throttle-controlled scooters or high-powered devices)

A compliant pedelec:

- Cannot operate without pedalling
- Has limited assistance (typically 250 W continuous)
- Cuts assistance at 25 km/h
- Has similar mass and kinetic energy to bicycles

Functionally and from a risk perspective these devices behave much more like bicycles than motorcycles. Treating them as motor vehicles ignores both engineering design and real-world risk characteristics.

Regulation should follow risk and function, not simply the presence of a motor.

2. The distinction between e-bikes and e-motorbikes is already simple to enforce

The enforcement simplification argument is also weak because there is already a clear and practical technical distinction between compliant e-bikes and motor-driven electric vehicles.

A compliant e-bike (pedelec):

- Provides assistance only while pedalling
- Has no independent throttle control
- Must cease assistance above 25km/hr

By contrast, an e-motorbike or non-compliant device:

- Has a throttle
- Can propel itself without pedalling
- Functions as a motor vehicle in operation

This throttle versus pedal-assist distinction is already widely used internationally as the primary regulatory separator and is straightforward for enforcement officers to identify. The presence of a throttle is a simple observable feature and does not require complex technical assessment.

Because a practical and enforceable distinction already exists, redefining all electrically assisted devices as motor vehicles is unnecessary to achieve enforcement clarity.

3. It creates regulatory disproportionality

The proposal would likely impose motor-vehicle regulatory logic on devices that do not present motor-vehicle risk. This could unintentionally justify requirements such as:

- Licensing
- Registration
- Compulsory insurance
- ADR compliance

Even if not immediately intended, once classified as motor vehicles these requirements become logically difficult to exclude.

This represents over-regulation of low-risk devices rather than targeted regulation of higher-risk devices.

4. It attempts to solve an alcohol law inconsistency by redefining vehicles rather than fixing the alcohol law

The underlying problem appears to be a legislative gap:

- Motor vehicles: 0.05 BAC limit
- Non-motor vehicles: dangerous operation threshold (~0.15 inferred)
- A grey zone between 0.05 and dangerous operation

Recommendation 11 attempts to address this by redefining vehicles instead of addressing the real issue: the absence of a consistent impairment framework across vehicle classes.

This is backwards regulatory design.

A more rational approach would be to:

- Define impairment thresholds applicable to all road users
- Create proportional limits based on risk categories
- Maintain correct vehicle classifications

Changing definitions to fix enforcement gaps risks creating further inconsistencies elsewhere.

5. It reduces regulatory precision in the name of simplicity

Simplification is valuable only when it does not reduce regulatory accuracy.

This recommendation effectively says:

"Because some devices are difficult to categorise, all electrically assisted devices will be categorised as the highest risk class."

This is administratively simple but technically crude.

Good regulation normally:

- distinguishes categories
- regulates proportionately
- targets actual risk drivers

Blanket classification achieves none of these.

Conclusion

Recommendation 11 represents regulatory overreach driven by enforcement convenience rather than sound classification principles. It fails to distinguish between motor-assisted and motor-driven vehicles, despite the existence of a clear and enforceable technical distinction based on whether a device has a throttle or requires pedalling.

Rather than redefining e-bikes as motor vehicles to resolve an alcohol enforcement gap, a more rational approach would be to address impairment provisions directly while maintaining risk-based vehicle classifications. This would preserve regulatory proportionality while still allowing effective enforcement.

Recommendation 12

That the Queensland Government amend state legislation to expressly provide that any device that does not meet the definition of a compliant e-bike or PMD with a top speed which exceeds 25km/h, be defined as a motorcycle, moped or other appropriate classification, and make clear in the legislation that:

- riders must hold an appropriate class of driver licence, such as a motorcycle licence*
- devices must be sold by a licensed motor trader*
- devices must be registered, and therefore meet Australian Design Standards, have a vehicle identification number (VIN), and be covered by Compulsory Third Party insurance*
- devices must only be ridden on roads, and are prohibited from being ridden on footpaths and bike paths*
- riders must wear a motorcycle helmet that complies with appropriate product safety standards.*

Alternative Recommendation 12

That the Queensland Government amend state legislation to expressly provide that any device that does not meet the definition of a compliant e-bike or PMD with a top speed which exceeds 25km/h, be defined as a motorcycle, moped or other appropriate classification, and make clear in the legislation that:

- riders must hold an appropriate class of driver licence, such as a motorcycle licence*
- **new devices must be sold by a licensed motor trader, with provision for private sale of registered second-hand devices subject to normal registration transfer requirements***
- devices must be registered, and therefore meet Australian Design Standards, have a vehicle identification number (VIN), and be covered by Compulsory Third Party insurance*
- devices must only be ridden on roads, and are prohibited from being ridden on footpaths and bike paths*
- riders must wear a motorcycle helmet that complies with appropriate product safety standards.*

Comment on Recommendation 12

While the proposed framework is generally appropriate, the requirement that devices be sold only by a licensed motor trader should apply to the **initial retail sale of new devices**, not to private second-hand transactions.

Provision should instead allow:

- Private sale of registered second-hand devices
- Transfer of ownership through the existing vehicle registration transfer process
- Continuation of registration and Compulsory Third Party insurance requirements

This would align these devices with the existing regulatory treatment of motorcycles and motor vehicles and avoid unnecessarily restricting legitimate private resale.

Recommendation 13

That the Queensland Government amend legislation to provide that:

- e-bikes and PMDs can only be ridden by individuals aged 16 years and over*
- riders of e-bikes and PMDs be required to hold at least a Queensland Class C learner licence which requires completion of the PrepL online learning and assessment program*
- this requirement does not apply to e-wheelchair and other accessibility device users*

Alternative Recommendation 13

That the Queensland Government amend legislation to provide:

- for the classification of compliant pedal-assist e-bikes as bicycles and not require licensing for their use*
- for the application of existing motorcycle licensing and registration requirements to throttle-controlled electric motorbikes and similar devices*
- improved safety outcomes for younger riders through education and awareness measures rather than licensing requirements*

and recognise that younger riders can safely operate compliant pedal-assist e-bikes, particularly when riding with parents or guardians, and that e-assist can improve safety by allowing children to maintain safe group riding speeds

Licensing

While the intent of improving safety outcomes for younger riders is understood and supported, the proposed licensing requirement is misplaced when applied to compliant pedal-assist e-bikes. The recommendation does not adequately distinguish between pedal-assist e-bikes and motor-driven electric vehicles such as throttle-controlled e-motorbikes, which should instead be classified and regulated as motorcycles.

1. Licensing is normally applied where vehicles create substantial third-party risk

Licensing systems are generally reserved for vehicles such as:

- Cars
- Motorcycles
- Heavy vehicles

because they involve higher levels of:

- Mass
- Speed
- Potential harm to other road users

Compliant pedal-assist e-bikes differ because they:

- Are speed limited (typically 25 km/h)
- Require pedalling to operate
- Have similar mass and performance characteristics to bicycles
- Present a risk profile similar to conventional bicycles

If conventional bicycles do not require licensing, a strong safety justification is required to apply licensing to pedelecs that operate in essentially the same way.

2. There is limited safety evidence supporting licensing for low-speed micromobility

A key policy question is whether licensing improves safety outcomes for low-speed vehicles.

International experience suggests:

- Bicycle licensing schemes have generally not improved safety outcomes
- Such schemes often cost more to administer than the benefits achieved
- Enforcement has proven difficult
- Many jurisdictions have discontinued bicycle licensing programs for these reasons

As a result, most countries do not require licensing for bicycles or pedal-assist e-bikes.

3. Licensing does not address the main causes of shared path incidents

Most conflicts involving e-bikes and bicycles arise from:

- Speed differentials
- Path design limitations
- Congestion
- Visibility issues
- Rider behaviour

These are primarily infrastructure and behavioural issues rather than knowledge deficits. Licensing systems test knowledge but do not significantly influence **judgement, courtesy, or environmental awareness**, which are the primary contributors to incidents.

4. Regulatory proportionality should be considered

Licensing systems involve:

- Administrative systems
- Testing processes
- Compliance monitoring
- Enforcement resources

For a low-risk vehicle category, the cost and complexity of such systems may outweigh any potential safety benefit. A widely accepted regulatory principle is that regulatory burden should be proportionate to demonstrated risk.

5. Licensing may discourage beneficial transport uptake

E-bikes deliver recognised public benefits including:

- Reduced reliance on cars
- Lower congestion
- Reduced emissions
- Improved population health
- Improved mobility for older persons
- Enabling younger riders to safely participate in family cycling by allowing them to keep pace through pedal assistance

Younger teenagers and children are often able to ride compliant pedal-assist e-bikes safely, particularly when riding with parents or guardians. In these situations, e-assist can improve safety by reducing fatigue and helping maintain safe and predictable group speeds.

The provision of injury-prevention infrastructure (separated cycleways) also supports the safe use of compliant pedal-assist e-bikes by younger school-age riders. Licensing or age restrictions applied to e-bikes may unintentionally restrict younger students from using safe, low-speed active transport options to travel to school, particularly where pedal assistance enables them to manage distance, hills and fatigue. This would be inconsistent with broader government objectives to encourage active school transport, reduce car dependency, and improve child health outcomes. Introducing licensing or age restrictions may therefore create unnecessary barriers to adoption and reduce these transport, health and family mobility benefits without clear safety justification.

6. Consistency across similar vehicle types is important

A key policy consistency question arises:

If licensing is required for pedal-assist e-bikes, why not also require it for:

- Conventional bicycles
- Mobility scooters
- Electric wheelchairs
- Electric skateboards

These devices often operate at similar speeds and in similar environments. Regulation is generally most effective when applied consistently across comparable risk categories.

7. Practical enforcement challenges should be considered

Licensing requirements would require:

- Routine rider checks
- Monitoring of minors
- Management of tourists and visitors
- Additional enforcement resources

Given the relatively low risk profile of pedal-assist e-bikes, enforcement effort may be better directed toward higher-risk transport categories.

8. International regulatory approaches do not generally require licensing

Most jurisdictions with extensive e-bike use, including:

- Netherlands
- Germany
- France
- Denmark

do not require licensing for compliant pedal-assist e-bikes. These countries have significant experience managing high cycling participation and generally regulate e-bikes as bicycles unless they are motor-driven.

9. Licensing is more appropriately applied to motor-driven electric vehicles

Motor-driven electric devices that:

- Operate via throttle
- Can propel themselves independently
- Function as motorcycles in operation

are more appropriately addressed through existing motorcycle classification, registration, and licensing frameworks rather than through new requirements applied to pedal-assist bicycles.

Conclusion

While improving safety among younger riders is an appropriate policy objective, applying licensing requirements to compliant pedal-assist e-bikes is unlikely to deliver meaningful safety benefits and risks creating a disproportionate regulatory burden. A more effective approach would be to maintain the existing treatment of pedal-assist e-bikes as bicycles while ensuring that throttle-controlled electric vehicles are regulated as motorcycles.

Recommendation 14

That the Queensland Government amend legislation to reduce the speed limits on all footpaths, for all e-mobility devices, to maximum 10km/h.

Alternative Recommendation 14

That the Queensland Government amend legislation to:

- *Provide that safety on shared paths be determined by safe interaction between users rather than reliance on a single prescribed maximum speed*
- *Require all shared path users to operate in a safe and predictable manner having regard to pedestrian density, visibility, and available passing space*
- *Provide that unsafe behaviours including unsafe passing, failure to give adequate warning, failure to yield when required, and obstruction of safe passage constitute offences*
- *Recognise that safety obligations apply to all shared path users, including cyclists, e-mobility users, runners and pedestrians*
-

Why a 10 km/h limit on shared paths is problematic

1. 10 km/h is not a cycling speed — it is a balancing speed

Most people do not realise this:

A typical bicycle becomes dynamically unstable below about **12 km/hr** for regular riders and perhaps **15km/hr** for the less confident.

Bicycle stability depends on the angular momentum of the wheels - the faster the wheels spin, the more they resist falling to one side or the other - the slower the wheel spins, the less resistance it offers so the less stable the rider becomes.

Below this speed:

- Steering becomes difficult
- Wobbling increases
- Balance requires skill
- Carrying luggage becomes harder

So forcing cyclists toward 10 km/h will actually **increase instability**, especially for:

- older riders
- cargo bikes
- touring bikes
- people with children
- less confident riders

This is a basic **physics** issue, not a behaviour issue.

2. 10 km/h is slower than normal human cycling speed

Typical real-world cycling speeds:

Relaxed rider → 15–18 km/h

Older rider → 14–17 km/h

Commuter → 18–25 km/h

So 10 km/h is not “slow cycling”.

It is **unnaturally slow cycling**.

That matters because when limits are set below natural operating speeds, compliance tends to collapse.

This is well known in road safety:

Unrealistic limits reduce respect for rules.

3. Speed alone is not what determines risk

Collision risk depends more on:

Relative speed

Visibility

Path width

User density

Shared user behaviour

Not absolute speed alone.

Example:

A cyclist at 18 km/h passing safely with space is safer than one riding 10 km/h weaving unpredictably.

Predictability matters more than raw speed.

4. A key misunderstanding: E-bikes do not automatically travel at 25 km/hr

Many assume:

E-bike = 25 km/h everywhere.

Reality:

E-bikes only assist *up to* 25 km/h. They commonly travel slower.

Many older e-bike users ride:

15–20 km/h

Because the motor reduces effort, not judgement.

5. Why very low limits can unintentionally increase conflict

If cycling becomes impractically slow:

Some riders:

Move onto roads

This can:

Increase road risk

Reduce path usage

Discourage active transport

Policies should encourage safe use, not discourage use.

6. The real safety factor: pedestrian and cyclist behaviour on shared paths

Behaviour matters more than absolute numbers.

Clear sight lines and courteous passing matter much more than moderate speed differences. Safety depends on reducing dangerous behaviours

- cyclists who ride at excessive speed on busy shared paths
- cyclists who do not use a bell to warn pedestrians ahead
- dog owners who fail to restrain their animals despite being aware of approaching cyclists
- pedestrians who refuse to create a clear path despite being aware of approaching cyclists

7. A more effective safety approach than rigid limits

Modern path design focuses on:

Context-sensitive speeds.

Meaning:

Crowded areas → slow

Open areas → moderate

Blind corners → caution

This mirrors how roads are managed. Blanket limits often ignore context.

8. Why education often works better than very low limits

Simple behavioural rules often produce better outcomes:

Slow when crowded

Give warning

Pass wide

Yield to pedestrians

These are understandable and enforceable.

A strict 10 km/h limit is difficult to:

Measure

Enforce

Understand

And will not change behaviour except to force cyclists who should not be there back onto our dangerous roads.

9. A practical comparison

Ask:

Would we require cars to travel at walking speed in all suburban streets to prevent accidents?

Instead we manage:

Design

Awareness

Behaviour

The same principles apply to shared paths.

There is clear evidence that appropriately set speed environments, such as 30, 50 and 70 km/h zones in urban areas, reduce death and injury while improving the safety and

livability of residential communities. This demonstrates the importance of applying consistent, evidence-based transport safety policy across all parts of the transport network.

Applying the same principles to shared pathways suggests that any proposed limits should also be supported by clear safety evidence and an understanding of real-world cycling dynamics. A limit that does not reflect these factors risks unintended consequences, including increased instability, conflict between users, and potentially increased injury risk on shared pathways rather than the intended safety benefit.

Ensuring that regulatory changes remain aligned with established evidence-based safety principles also helps protect governments from the risk that well-intentioned but unsupported measures could later be shown to have produced adverse outcomes, with the associated policy and potential legal consequences that may follow.

10. A more balanced principle that transport planners use

Safe shared path use usually aims for:

“Slow enough to interact safely, fast enough to remain stable and practical.”

For most bicycles this lies roughly around:
15–20 km/h in open conditions.

That aligns with natural riding behaviour.

Is it the intention of the Parliamentary Committee that 10km/hr apply to ordinary bikes as well? This inconsistency exposes the absurdity of the proposed limit.

11. The key policy question that should be asked

Not:

“What is the lowest possible speed?”

But:

“What speed produces the safest and most predictable interactions?”

Those are not always the same thing.

Good safety policy matches how people actually move.

If limits are set below natural cycling speeds, riders either become unstable or ignore the rule.

The safest shared paths are those where behaviour, design, and realistic speeds work together.

Recommendation 15

That the Queensland Government amend legislation to prescribe an offence of riding an e-mobility device on a footpath in the vicinity of a pedestrian without due care and attention.

Alternative Recommendation 15

That the Queensland Government amend legislation to:

- Require all shared path users to exercise due care and attention toward other users, particularly vulnerable users such as infants, young children and frail older persons*
- Provide offences for unsafe behaviour by any shared path user that creates risk to others*
- Apply these provisions consistently to cyclists, e-mobility users, runners and pedestrians*

Comment on Recommendation 15

While the objective of improving pedestrian safety is appropriate and strongly supported, the proposed offence is problematic because it applies only to e-mobility users despite shared paths being environments where safety depends on the behaviour of **all users**, including pedestrians and cyclists.

Conflicts on shared paths typically arise from unsafe interactions rather than from the type of device being used. These may include:

- Unsafe passing behaviour
- Failure to maintain situational awareness
- Unpredictable changes in direction
- Failure to provide warning when approaching
- Pedestrians obstructing safe passage
- Pedestrians failing to control animals

Particular care is especially important where vulnerable users are present, including infants, very young children who may behave unpredictably, and frail older pedestrians whose mobility or reaction time may be limited. Protecting these groups is best achieved through a general obligation on **all** path users to act with due care, rather than placing responsibility on only one category of user.

Creating an offence that applies only to e-mobility riders risks being both ineffective and inequitable because it does not reflect the shared nature of responsibility required to safely accommodate vulnerable users.

A more effective and consistent approach would be to establish a general duty of care applying equally to all shared path users. This would better reflect the reality that safety depends on predictable, attentive and considerate behaviour by everyone using the path, particularly in the presence of vulnerable pedestrians.

Recommendation 16

That the Queensland Government support local governments to use local laws to regulate e-mobility devices including setting lower speed limits for high pedestrian traffic zones and pathways.

Alternative Recommendation 16

That the Queensland Government:

- *Maintain consistent state-wide rules governing safe shared path use*
- *Support local governments to manage high pedestrian activity areas through design, signage and separation measures*
- *Provide that all shared path users must operate in a safe and predictable manner having regard to surrounding conditions*

Comment on Recommendation 16

While the intent of improving safety in areas of high pedestrian activity is supported, allowing local governments to impose varying speed limits risks creating an inconsistent and difficult-to-understand regulatory environment, particularly where riders may pass through multiple jurisdictions on a single journey.

More importantly, safety on shared paths is determined by **multiple** interacting factors, of which relative speed is **only one** and not necessarily the most important. Key contributors to safety outcomes include:

- Predictability of behaviour
- Safe passing practices
- Situational awareness of all users
- Path design and available space
- Visibility and congestion
- Consideration toward vulnerable users

A regulatory approach focused primarily on numerical limits risks overlooking these more significant contributors to conflict and may not produce the intended safety improvements.

A more effective approach would be to emphasise safe interaction between all users through consistent behavioural obligations, while allowing local governments to improve safety through infrastructure design, separation measures, and appropriate signage.

Recommendations 14, 15 and 16 as they stand collectively risk creating an inconsistent and difficult-to-enforce regulatory framework by focusing on numerical limits and device categories rather than the primary determinants of shared path safety, namely predictable behaviour, safe interaction between users, and protection of vulnerable pedestrians.

Recommendation 17

That the Queensland Government and local governments increase and improve signage of speed limits on footpaths and requirements to give way to pedestrians.

Alternative Recommendation 17

That the Queensland Government and local governments increase and improve signage on shared pathways to clearly communicate:

- *Requirements for cyclists and e-mobility users to give way to pedestrians and operate safely*
- *The shared responsibility of all path users to act predictably with due care and not obstruct the safe passage of others*
- *The obligations of pedestrians to maintain situational awareness and keep animals under effective control so as not to create hazards for other path users*

Comment on Recommendation 17

Improved signage should reflect that safety on shared paths depends on the behaviour of **all users**, not only cyclists and e-mobility riders. While pedestrian priority is appropriate, safety is improved when signage also reminds pedestrians of their obligations to remain aware of other users, avoid obstructing the path, and keep animals under effective control.

Addressing shared responsibilities in this way better reflects the causes of many path conflicts and supports safer and more predictable interactions for everyone, particularly vulnerable users such as children and older pedestrians.

Recommendation 18

That local governments stipulate that shared scheme operators use technology to prohibit the use, or limit the speed of shared devices to 10km/h or lower in identified high pedestrian zones.

Comment on Recommendation 18

This recommendation appears unnecessary as the safety concerns it seeks to address are already covered by earlier recommendations relating to shared path behaviour, signage, and local management of high pedestrian activity areas.

Introducing an additional technology-specific provision risks creating duplication and regulatory complexity without addressing any clearly identified gap. Safety on shared paths is more effectively addressed through consistent behavioural obligations applying to all users rather than through device-specific technological restrictions.

For clarity and coherence of the regulatory framework, it would be preferable for this recommendation to be removed, with reliance instead placed on the broader behavioural and infrastructure measures already proposed.

Recommendation 23

That the Queensland Government review, with a view to strengthening, the existing penalties for offences associated with the most significant risk factors, including riding an illegal device, riding at excessive speed, failure to wear a helmet, riding under the influence of alcohol or drugs, and hooning.

Comment on Recommendation 23 – Helmet penalties

While strengthening penalties for genuinely high-risk behaviours such as intoxicated riding, use of illegal devices, or reckless riding is supported, the inclusion of helmet offences within this group should be approached with caution, as the issue of compulsory helmet use for low-speed micro-mobility remains contested internationally.

There is evidence from overseas experience that mandatory helmet requirements, particularly for short, low-speed local trips, may reduce participation in cycling and e-bike use. Because cycling and active transport produce well-established population health benefits, reduced participation may result in unintended negative public health consequences that may outweigh the individual protective benefit in some low-risk situations.

International experience, particularly in parts of Europe, suggests a more nuanced behavioural pattern. In the author's extensive experience, cyclists overseas undertaking longer rides, higher speed road riding, or cycle touring invariably wear helmets. However, for short local trips on separated pathways at moderate speeds, helmet use is often discretionary and there is limited evidence that this substantially increases head injury risk in those specific low-risk environments.

There is also evidence that compulsory helmet requirements can act as a barrier to short local trips, particularly spontaneous journeys, thereby discouraging active transport and reducing the associated health and congestion benefits.

This is not to suggest that Queensland's current helmet laws should necessarily be changed in this context. However, the committee should recognise that helmet policy remains an area of ongoing debate internationally, and that stronger penalties may not necessarily produce improved safety outcomes if they discourage low-risk active transport use.

A more effective approach may be to ensure that enforcement and penalties are focused primarily on behaviours that clearly and consistently contribute to serious injury risk, such as intoxicated riding, use of illegal high-powered devices, and dangerous riding behaviour.