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

Submission No: 2460
Submission By: See.Sense

SEE.SENSE

Real-World Speed Data Shows Legal E-bikes Are Not the Problem

Submission to the State Development, Infrastructure and Works Committee on the Transport and Other Legislation (Managing E-mobility Use and Protecting Our Communities) Amendment Bill 2026

10 April 2026

Mr Jim McDonald

Chair

State Development, Infrastructure and Works Committee

Queensland Parliament

See.Sense is a smart cycling technology company whose IoT sensors are fitted to bicycles across Australia. We collect real-world speed and safety data from thousands of cyclists. We're submitting because our data directly contradicts the assumptions underpinning the Bill's restrictions on legal e-bikes.

About See.Sense

See.Sense is an IoT sensor company that collects objective, real-world cycling data. We are a Northern Ireland-based cycling and micromobility technology company with a growing presence in Australia through our Brisbane office.

We develop award-winning, patented AI-enabled sensor technology, embedded in intelligent bike lights and Summit GPS trackers. These devices are fitted to bicycles across Australia and internationally, measuring speed, acceleration, GPS position, and abnormal events to generate objective insights into cycling behaviour and safety.

In Australia, we've partnered with leading transport and research bodies:

- Transport Accident Commission (TAC)
- Deakin University and iMOVE Cooperative Research Centre — Light Insight Trial
- National Road Safety Action Grant partnership with Deakin University and QUT
- Bicycle Queensland

We are members of ITS Australia, AITPM, and the Australian College of Road Safety.

Internationally, our sensors have been deployed on Dott's shared e-scooter fleet in Helsinki to support city-led safety analysis. We were awarded the Prince Michael International Road Safety Award for Vision Zero work with Transport for London.

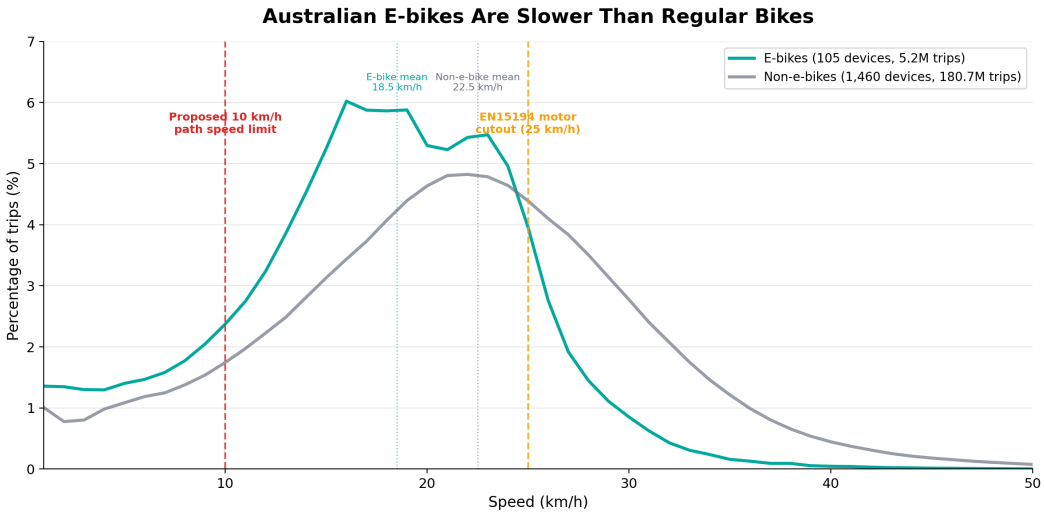
We currently have 1,565 devices deployed in Australia: 105 on e-bikes and 1,460 on regular bicycles. These devices have captured over 185 million data points.

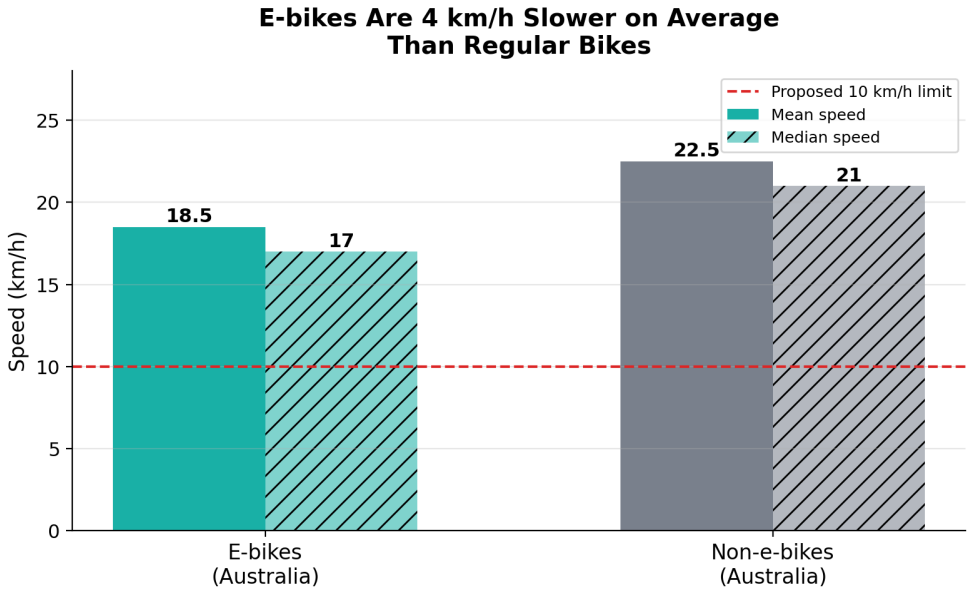
Key Finding: E-bikes Are Slower Than Regular Bikes

Our data is unambiguous:

- Mean speed: e-bikes 18.5 km/h vs non-e-bikes 22.5 km/h
- Median: 17 km/h vs 21 km/h
- Mode: 17 km/h vs 23 km/h

E-bikes are on average 4 km/h slower than regular bikes. This is entirely consistent with the EN15194 standard, which limits motor assistance to speeds at or below 25 km/h. The motor cuts out at 25 km/h, and our data shows it's working exactly as designed.





Building on Previous Evidence

See.Sense previously submitted to the Parliamentary Inquiry into E-Mobility Safety that preceded this Bill. In that submission, we advocated for a data-led, Safe Systems approach to e-mobility regulation. The Inquiry's final report endorsed infrastructure investment as a priority. The Bill implements the restrictions — and extends them well beyond what the Inquiry recommended — but commits not one additional dollar to infrastructure.

We've now had a year to gather more data. The evidence is clearer than ever: legal e-bikes present no greater safety risk than regular bicycles.

A Safe Systems Approach — Not Punitive Legislation

We strongly support the Safe Systems approach, recognising that human error is inevitable and system design must proactively mitigate harm. This isn't about blaming riders — it's about designing better infrastructure and policies that work with human behaviour, not against it.

Infrastructure is a core pillar of the Safe Systems model. Virginia Tech research confirms that infrastructure shortcomings — surface transitions, lack of separation from traffic, poor sight lines — contribute to the majority of e-mobility incidents. Riders don't cause these problems; inadequate paths do.

This Bill takes a punitive approach instead of investing in infrastructure. Speed limits, licensing, and age bans don't fix bad paths. The Inquiry recommended infrastructure investment but not one additional dollar has been committed.

A genuine Safe Systems approach would address the root causes. This Bill addresses neither the causes nor the data.

The Data Deficit — Legislating Without Evidence

Queensland faces a major challenge: obtaining consistent, reliable e-mobility data. Operator-supplied data is inconsistent, often proprietary, and usually unavailable to regulators. There's no effective system for collecting data from private e-scooters and e-bikes — only from dockless rental fleets.

This creates a fundamental problem: we need standardised national reporting formats and shared data infrastructure. E-mobility operators should be required to report standardised safety metrics to the regulator.

This Bill imposes sweeping restrictions without the evidence base to justify them. It's legislation by assumption, not data. See.Sense data is one of the few objective, sensor-based datasets available in Australia. We're offering it to the Committee because the alternative — guessing — has led to this Bill.

Before restricting legal e-bikes, Queensland should mandate standardised data collection and invest in sensor-based monitoring.

The Proposed 10 km/h Limit: Discriminatory and Unworkable

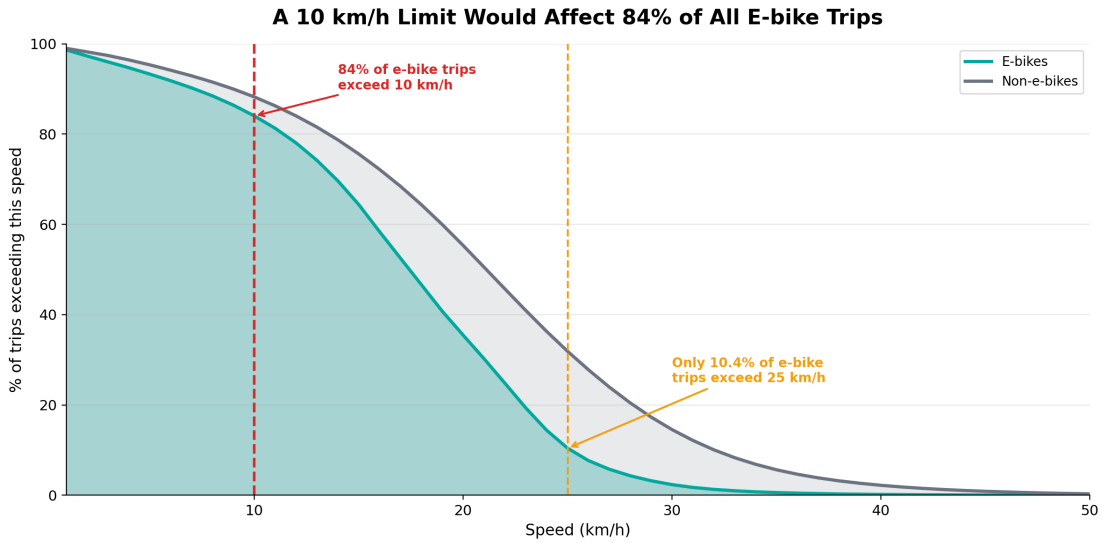
The Bill proposes a 10 km/h speed limit on shared paths and footpaths for e-bikes (Section 24D) and personal mobility devices (Section 24C). Regular bikes are NOT subject to this limit.

This creates an absurd situation: a regular bike travelling at 30 km/h on a shared path is legal; an e-bike travelling at 11 km/h is illegal. This is discriminatory and unsupported by evidence.

Our data shows why:

- 84% of e-bike trips exceed 10 km/h — but so do 88% of regular bike trips
- A 10 km/h limit would affect virtually ALL cyclists, not just e-bike riders
- DTMR's own guidance states bicycles become unstable below 11 km/h

Practically, this limit would push riders onto roads, increasing exposure to serious injury. It's unworkable.



The Bill singles out e-bikes despite our data showing they're already slower than regular bikes. This makes the discriminatory nature of the proposal even clearer.

Legal E-bikes Cluster Below 25 km/h — The Motor Cutout Works

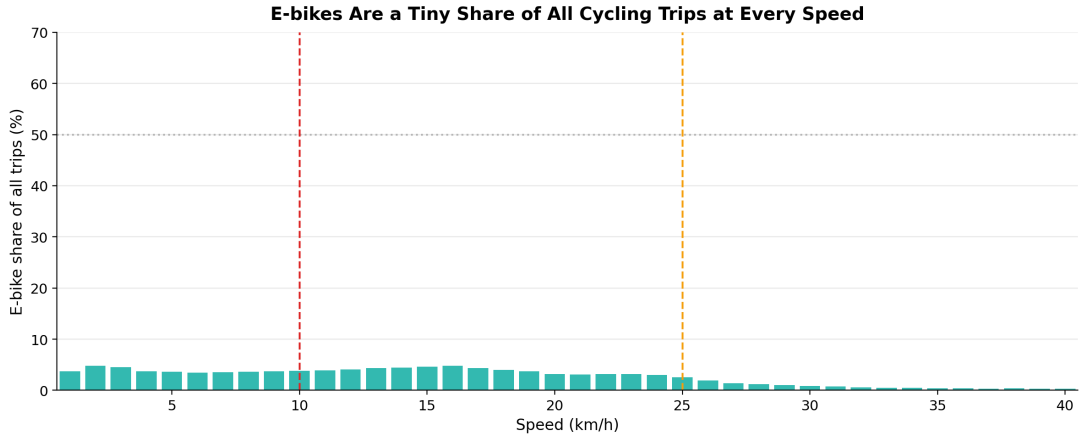
Our data shows the EN15194 standard is working exactly as intended:

- 89.6% of e-bike trips remain at or below 25 km/h
- Only 10.4% exceed 25 km/h (compare this to 31.9% of regular bikes exceeding this speed)

There is no speed-based case for singling out legal e-bikes for additional restrictions. The motor cutout is working. Compliant e-bikes are performing as designed.

E-bikes Are a Tiny Fraction of Cycling

E-bikes represent a small share of total cycling trips in our dataset. The speed profile of legal e-bikes presents no additional risk beyond regular cycling.



Restricting this small segment of riders while ignoring the data is not evidence-based policy.

Technology Can Help — If the Government Lets It

Rather than punitive speed limits, Queensland could harness technology to move beyond restrictions and into proactive safety.

Our sensors detect:

- Sharp braking events — which identify areas of high conflict
- Swerving and braking patterns — which identify hazardous areas proactively
- Surface condition monitoring — which identifies poor-quality paths

We also profile riding styles with a ‘Rider Score’ that identifies genuinely risky users — not based on vehicle type, but on actual behaviour.

This data empowers cities to move beyond punitive measures into proactive infrastructure improvement. In Helsinki, our sensors on Dott’s fleet support city-led safety analysis. Queensland could adopt this model.

Instead, this Bill pushes us backward.

Recommendations

1. Remove the proposed 10 km/h speed limit for e-bikes on paths (Section 24D). It’s discriminatory, unworkable, and unsupported by evidence. Regular bikes aren’t subject to this limit — why single out e-bikes that are demonstrably slower?
2. Adopt a clear e-bike definition based on EN15194 that does not retrospectively criminalise existing compliant e-bikes.
3. Drop licensing, speed limits, and age bans for legal e-bikes. The data shows they present no greater risk than regular bicycles.

4. Invest in cycling and micromobility infrastructure as the Inquiry recommended. Infrastructure is the key to safety, not speed limits.
5. Adopt a data-led approach: mandate standardised safety data collection from e-mobility operators and invest in sensor-based monitoring.

Closing

We're happy to provide the committee with full access to our dataset and to present in person. Our data is objective, sensor-based, and covers millions of real-world cycling trips in Australia. The evidence is clear: legal e-bikes are not the problem. Restriction is not regulation. Evidence is.

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