

Review of E-Scooter and E-Bike Regulatory Framework



**Personal Mobility Devices &
Power-Assisted Bicycles in
South Australia**



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1. About RAA

RAA is a passionate advocate for South Australia. We are South Australia's largest member-based organisation, representing more than 840,000 members and reaching into more than 70% of South Australian households.

We exist to make life better for our members and the community and we are committed to working with government, industry and the community to deliver outcomes that keep South Australia moving safely and affordably.

RAA is making a submission to the Government's review of e-scooter and e-bike laws because the policy settings South

Australia adopts now will shape safety outcomes for years to come. RAA wants South Australia to get these settings right early, before poor behaviours become entrenched.

This submission is informed by RAA's own research and community engagement, including a representative member survey, a state-wide safety campaign and a cross-sector roundtable held during National Road Safety Week.

RAA has also reviewed the considerable amount of work undertaken by other jurisdictions and stakeholders to inform our views and positions. This includes Queensland's parliamentary inquiry into e-mobility, inquiries undertaken in NSW and Western Australia, and positions taken by Bike SA, the AMA (SA) and other motoring clubs.

2. Executive summary

RAA supports e-scooters and e-bikes as legitimate, valuable modes of transport for South Australians. These devices have the potential to reduce car trips, lower emissions, ease congestion and expand access to transport for people who cannot or choose not to drive.

RAA believes the core Personal Mobility Device (PMD) framework for e-scooters introduced in July 2025 is broadly sound. This includes the 10 km/h and 25 km/h speed structure and the 16-plus minimum age requirement. However, awareness of the rules is low and compliance is poor as a result.

E-bikes are a separate matter. They don't have a dedicated regulatory framework of their own, instead sitting within

the existing bicycle framework. There are technical limits on power, speed and pedal operability determining what counts as a legal e-bike; however, these regulations are not well-understood. This lack of understanding and the absence of a standalone framework are contributing to confusion and low awareness of the rules and standards that do apply.

This is compounded by a growing number of high-powered e-bikes and e-scooters that have been modified or imported in breach of Australian standards. They sit outside any framework and are essentially unregistered vehicles. They are faster, heavier and far more dangerous than compliant devices and increasingly common on South Australian roads and paths. This is the single most urgent safety issue in the e-mobility space, and it demands action at both state and federal level.

3. Recommendations

This section summarises RAA's core recommendations to the SA Government arising from this submission. Full reasoning and supporting evidence for each recommendation are set out in Section 5, RAA's Response to Consultation Questions.

Awareness, enforcement and education

- Commit to a comprehensive, multi-channel public education campaign on PMD and e-bike rules. This should also include targeted education to parents and carers about their legal liability under the Road Traffic Act's 'causing and permitting' provisions.
- Embed e-scooter and e-bike rules in the learner driver theory test and the driver's handbook, taking advantage of the new learner driver assessment pathway being introduced in mid-2027.
- Embed PMD road safety education in the school curriculum, building on existing programs such as Way2Go and RAA's Street Smart Primary and Street Smart High programs (RAA is already working to expand e-scooter and e-bike content within Street Smart).
- Increase targeted, publicised enforcement of footpath speeding, helmet non-compliance and underage riding, potentially timed to coincide with seasonal peaks in usage and major events such as Adelaide Fringe.
- Provide SAPOL with expanded powers to seize, impound and where appropriate, destroy non-compliant devices, with publicised enforcement actions to maximise deterrent impact.

Device standards and import controls

- Introduce strict import control for e-bikes, with EN15194 (the international e-bike safety standard covering motor power, speed cut-off and battery safety) made mandatory at the federal level and adopted as South Australia's state compliance standard. Compliance labelling required as a condition of import and sale to support better enforcement.
- Develop a motor power output cap standard for PMDs at the national level, rather than states developing individual rules, recognising that the ACCC has recently committed to developing a mandatory national safety standard.
- Undertake further research on stability standards before changing the current 45kg weight limit. This

limit may stop safety design features like larger wheels and a lower centre of gravity; however, increasing the limit requires further investigations.

- Consider applying existing motor dealer licensing requirements to retailers selling high-powered non-compliant devices, consistent with SA's current treatment of these devices as motor vehicles for enforcement purposes.

Registration of non-compliant devices

- No new registration pathway for e-bikes and e-scooters that don't meet the EN15194 or applicable PMD standards. Instead, they should be assessed against existing motor vehicle and motorcycle categories. A device that meets one of these categories, such as a moped or light motorcycle, must be registered accordingly. A device that meets none of them is illegal to use on public roads and paths.

Minimum age

- Retain 16 years as the minimum age for PMD riders.
- Introduce a minimum age of 16 years for all e-bike riders, including riders of compliant e-bikes, aligning the threshold with the existing PMD minimum age. RAA's position prioritises safety, while recognising the potential impact on mobility options for some younger riders currently using compliant e-bikes lawfully.

Speed, access and rider safety

- Retain the current PMD speed framework, with strengthened enforcement of both footpath and on-road speeding.
- Develop advisory speed reminder signage for high conflict shared path locations and introduce a mandatory speed limit of 10 km/h for all riders, including cyclists, PMDs and e-bikes, when passing pedestrians on shared paths.
- Extend drug and alcohol testing powers to riders of PMDs, e-bikes and conventional bicycles.

Helmets

- Encourage full-face helmet use for privately-owned stand-up e-scooter and e-bike riders through education.
- Undertake further research into the safety case for a full-face helmet mandate, with Government to consider introducing a mandate on the basis of that research.
- Mandatory replacement standards for hire scheme helmets following any impact or crash.

Hire schemes

- Continuation of hire schemes, subject to appropriate safety conditions.
- Support for hire scooters that embody safety features such as autonomous speed management, geofencing and remote parking, assessed on their merits.

Infrastructure

- Invest at least \$10m each year into a dedicated cycling and e-mobility infrastructure fund, supported by a State Cycling Strategy.
- Complete priority projects including the Gawler Greenway, a River Torrens Linear Path connection at the Royal Adelaide Hospital, and a continuous shared-use path along Greenhill Road, including the section between Fullarton Road and ANZAC Highway.

Data and insurance

- Develop a comprehensive e-mobility crash data collection framework, with SA Health and SAPOL, that also resolves how e-bike and PMD crashes are classified in crash data systems.
- Provide clear public information on the insurance and personal liability implications of PMD use.

Public transport

- No in-principal objection to compliant e-scooters and e-bikes being carried on trains, subject to practical stowage requirements such as devices being switched off while on board. Continued restriction on buses, given limited space to stow a device without displacing other passengers or accessibility priorities.
- Undertake an independent assessment of battery fire risk in enclosed public transport environments by the Metropolitan Fire Service, or another appropriate fire safety authority, before final rules are settled.

4. RAA's Evidence Base

This section summarises the findings from RAA's primary research and engagement and inquiries from interstate. These findings directly inform RAA's positions in Section 5.

4.1 Member Research: E-Scooter & E-Bike Safety Research Report

In February 2026, RAA conducted a representative survey of over 800 South Australians examining attitudes, knowledge and behaviours relating to e-scooters and e-bikes. Key findings are summarised below.

E-scooter findings

- 22% of South Australian households own an e-scooter.
- 85% of owners use their device daily or several times a week.
- 54% of South Australians are aware that privately-owned e-scooters are legal on public roads and footpaths.
- Rule awareness is very low. Only 15% correctly identified the 10 km/h footpath speed limit, and only 20% the 25 km/h road limit. 48% are unaware of the minimum PMD riding age of 16 years.
- 38% support private e-scooters being legal, 34% oppose.
- 89% agree e-scooter riders should be better educated about road rules.
- 80% agree more enforcement is needed.
- 71% are concerned about riders on footpaths going too fast (top concern).
- 22% have been involved in a collision or near miss with an e-scooter.

E-bike findings

- 13% of SA households own an e-bike.
- 17% of non-owners intend to purchase one within 12 months.
- 66% of South Australians are aware e-bikes are legal on public roads and paths.
- Only 22% correctly identified the 25 km/h pedal-assist cut-out speed. 83% incorrectly identified or are unsure whether minimum age restrictions apply to e-bikes.
- 70% support introducing a minimum age for e-bike riders. 16 years is the most preferred age (36%).
- 46% support privately-owned e-bikes being legal, 20% oppose.

- 82% agree e-bike riders should be better educated, 66% are concerned about footpath speeds (top concern).
- 17% have been involved in a collision or near miss with an e-bike.

Community priorities

When asked what improvements are most important across both devices, the top responses were: stricter enforcement of rules (32%), better rider education on road rules (31%), higher penalties for rule-breakers (29%), designated lanes or paths (28%), mandatory safety courses (27%), and banning use on footpaths (26%).

4.2 Education Campaign: 'Don't Bury Your Head in the Footpath'

In May 2026, RAA launched a state-wide e-mobility safety awareness campaign *Don't bury your head in the footpath*. The campaign was developed in response to evidence of persistent rule non-compliance and low awareness of the July 2025 regulatory changes.



Channels and reach

The campaign is running across bus shelter advertising near schools and skate parks, Adelaide Oval big screens (during AFL games on 16 and 23 May), retail digital screens near cinemas, boosted social media, samove member e-news, Port Adelaide FC and Adelaide FC player videos, and a campaign hub at raa.com.au/facethefacts.

The campaign was launched during National Road Safety Week, with the launch press conference attended by the Minister for Police and SA Police. Street Smart High school program integration is planned for September 2026.

RAA's campaign seeks to address three barriers:

- Denial (riders who have not been hurt do not believe they will be).
- Ignorance (the rules are genuinely confusing, and many South Australians are unaware they changed in July 2025).
- Defiance (riders who know the rules and choose not to follow them because they do not expect enforcement consequences).

The campaign targets the first two barriers in its initial phase and is designed to evolve to address defiance as enforcement activity intensifies.

4.3 National Road Safety Week Roundtable

RAA convened a cross-sector roundtable during National Road Safety Week. The event brought together government, police, academia, local government, community organisations, and school students. Participants included Bike Adelaide, BikeSA, Centre for Automotive Safety Research (Adelaide University), Country Fire Service, Department for Infrastructure and Transport, Lifetime Support Authority, Local Government Association South Australia, Motorcycle Riders Association, Office of Hon. Michael Brown MP, Regional Development Australia Adelaide, South Australia Police, South Australian Freight Council, South Australian Road Transport Association, Toll Aviation, and Walking SA.

The roundtable identified four pillars of an effective response to e-mobility safety. These are enforcement, education, import standards, and infrastructure. The key findings and recommendations from the roundtable are summarised below.

Enforcement

- Participants supported more visible and meaningful enforcement of PMD rules. Seizure and publicised crushing of illegal devices was identified as a powerful deterrent. Device registration was not supported as a crash prevention tool in its own right.

- EN15194 was identified as the appropriate benchmark for import compliance standards, with participants noting that the current voluntary Commonwealth reinstatement is insufficient.
- Illegal e-bikes are in some cases being misclassified in crash data as motorcycles, distorting safety and insurance outcomes for that group.

Education

- Current government education strategies are widely regarded as ineffective. Young riders are best reached through consequence-focused content in high-visibility locations.
- Parents are a critically underserved audience. Many are unaware of the rules and of their potential legal liability under the Road Traffic Act's 'causing and permitting' provisions where a parent knowingly allows unlawful device use.
- Embedding e-mobility rules in the learner driver theory test was identified as a practical way to reach new drivers.
- Integrating PMD road safety education into the school curriculum was recommended, building on existing programmes such as Way2Go, Street Smart Primary and Street Smart High.

Safety concerns

- Impaired riding is a significant factor in serious PMD crashes, particularly single-rider e-scooter incidents linked to alcohol and uneven path surfaces.
- PMD rider visibility is a consistent crash factor. Riders often wear dark clothing and seldom use lights during daylight hours.
- Hire scheme helmets involved in crashes may not be replaced as they should be, offering reduced protection in a subsequent impact.
- Single-rider PMD crashes are significantly underreported. The true scale of harm from falls and single-vehicle incidents is not captured in official data.
- CTP scheme implications of PMD crashes are not well understood. Investigation was recommended.

Infrastructure

- The lack of a coordinated, state-level active transport network was identified as a fundamental barrier to safer cycling and PMD use.
- Additional funding to the State Bicycle Fund was recommended.
- Shared-use path conflicts have worsened significantly since the rise of e-mobility.
- Advisory speed reminder signage and visible enforcement reminder signs in high-conflict shared path locations were recommended.

Areas requiring further research

- There was no consensus on a full-face helmet mandate. Concerns included the de-humanisation effect, identity concealment, and the risk that a hire scheme mandate could reduce overall helmet compliance.
- There was no consensus on age limits for e-bikes at the roundtable, and further research and community consultation were recommended at the time.

4.4 National reviews and reports

Queensland

Queensland ran a full parliamentary inquiry into e-mobility safety from May 2025 to March 2026. It drew over 1,200 submissions and heard from more than 140 witnesses, prompted by 12 deaths and over 6,300 emergency department presentations linked to e-mobility incidents in 2025. The inquiry produced 28 recommendations covering device standards, import controls, enforcement, and public education.

Reforms stemming from the inquiry include a minimum age of 16 for e-bike and PMD riders (paired with a learner's licence requirement), mandatory alignment with the EN15194 standard, stronger anti-tampering and battery safety rules, and a requirement that high-powered non-compliant devices be sold only by a licensed motor dealer. These take effect progressively from 1 July 2026.

New South Wales

NSW is actively reviewing whether to introduce a minimum age for e-bike riders. An expert review led by Transport for NSW is examining the question directly, with findings due in mid-2026. Under current NSW road rules, a child of any age can ride an e-bike, and any rider can carry a passenger if the bike is designed for it.

This sits within a broader wave of NSW reform. The state's Legislative Council ran its own parliamentary inquiry from June 2024 to February 2025. The report made 34 recommendations, including reviewing NSW's then-higher 500-watt e-bike power allowance, allowing e-scooters onto footpaths with a speed limit, and addressing battery safety, though it recommended against licensing or registering e-devices, on the basis that this would disproportionately limit accessibility for low-income riders. Since then, NSW has scrapped its 500-watt e-bike allowance in favour of the standard 250W/25km/h EN15194 benchmark from March 2026 and introduced new lithium-ion battery safety requirements through NSW Fair Trading.

Victoria

Victoria has taken targeted regulatory steps. Energy Safe Victoria consulted on declaring e-bikes, e-scooters,

e-skateboards and self-balancing scooters "controlled electrical equipment," which would require certification and marking before sale, similar in effect to NSW's approach, with a consultation summary published in January 2026. Victoria has also introduced new public transport carriage rules from December 2025, restricting converted or modified e-bikes from trains while continuing to permit compliant devices, and limiting trams and buses to foldable devices only. Unlike NSW and Queensland, Victoria currently has no minimum age for e-bike riders, only for e-scooter riders, and has not signalled any review of that position.

Western Australia

WA's Legislative Assembly referred an inquiry to its Community Development and Justice Standing Committee on 18 June 2025, initially covering e-rideables such as e-scooters, e-skateboards and hoverboards. On 13 August 2025, the scope was broadened to include e-bikes and e-dirt bikes, prompted by a pedestrian fatality involving a non-compliant, unregistered device. The committee tabled its report on 4 December 2025.

The committee found e-scooter incidents attended by St John Ambulance rose from 120 in 2021 to 539 in 2024, and that e-bike crash data is poorly captured, with no mandatory reporting requirement. It recommended aligning device standards with the Australian Design Rules and advocating for this nationally. WA already has an existing minimum age of 16 for e-bike riders, predating this inquiry, and is separately leading national work on an integrated PMD regulatory framework in partnership with the National Transport Commission.

National and local evidence on facial and head injuries

A three-year research partnership between RACQ and the Royal Brisbane and Women's Hospital, through the Jamieson Trauma Institute, has found severe facial and head injuries to be a major and growing concern among e-scooter casualties.

Between November 2018 and April 2025, almost 6,300 people presented to Queensland emergency departments with e-mobility crash injuries, many involving severe facial trauma. That research also found 65% of injured riders in one cohort were wearing a helmet at the time of their crash, showing that standard open-face helmets do not protect against facial injuries specifically. RACQ's own survey work found 74% of e-scooter users already recognise full-face helmets offer better protection.

Locally, the University of Adelaide's Centre for Automotive Safety Research has recorded rising e-scooter collision presentations at Adelaide hospitals, consistent with international findings that e-scooter-related hospital admissions show higher rates of traumatic brain injury than bicycle-related admissions.

5. RAA's Response to Consultation Questions

This section addresses the specific questions raised in both the SA Government's PMD Discussion Paper and E-Bike Discussion Paper. Where RAA's positions cut across both papers, they are addressed in the relevant sub-section and cross-referenced where appropriate.

Part A: Personal Mobility Devices

The SA Government introduced a PMD regulatory framework on 13 July 2025. RAA believes this framework is sound. The primary challenge is not the rules themselves but the fact that they are poorly understood or ignored by riders.

A1. Key safety considerations

RAA's research found that only three of nine e-scooter rules were correctly identified by more than 50% of South Australians.

Awareness of speed limits is especially poor. Only 15% correctly identified the 10 km/h footpath limit, and only 20% the 25 km/h road limit. 48% are unaware of the 16-year minimum riding age.

RAA's *Don't bury your head in the footpath* campaign identifies three barriers driving non-compliance. These are denial, ignorance, and defiance. The campaign targets the first two. Addressing defiance requires enforcement consequences. RAA therefore supports:

- Increased targeted enforcement of on-road and footpath speeding, helmet non-compliance, and underage riding, with publicised blitzes that reinforce the consequences of non-compliance.
- A government-funded, multi-channel public education campaign about PMD rules.
- Targeted education directed specifically at parents and carers about the rules governing youth PMD use and their potential legal liability under the Road Traffic Act's 'causing and permitting' provisions, which makes it an offence for a person in possession or control of a PMD to cause or permit a person under 16 to ride or be carried on it.
- Embedding PMD road safety education in the school curriculum, building on existing programs such as Way2Go and RAA's Street Smart Primary and Street

Smart High (planned for September 2026). RAA is separately working to expand e-scooter and e-bike content within the Street Smart program.

- Embedding e-scooter and e-bike rules in the learner driver theory test and the driver's handbook, taking advantage of the new learner driver assessment pathway being introduced in mid-2027.

A2. Device specifications (size, weight, power)

Dimensions

The current PMD dimensional limits align with the Australian Road Rules standard used by most other jurisdictions. RAA does not recommend changes to the dimensional limits.

Weight and stability

Weight alone is a limited proxy for PMD safety. Research by the Centre for Accident Research and Road Safety Queensland (CARRS-Q) found that the most effective ways to improve PMD stability are larger wheel sizes and a lower centre of gravity, neither of which is captured by a weight limit. Queensland has moved to 60kg, and Western Australia sits at 25kg, but neither figure is grounded in a stability standard.

RAA believes a nationally consistent, performance-based stability standard for PMDs is better suited to this technical question, and should be developed before SA revisits the current 45kg weight limit. This ensures any change is grounded in evidence about what actually improves stability rather than an arbitrary figure.

Power restrictions

RAA supports a mandatory power restriction to limit the maximum motor output of compliant PMDs, and compliance labelling to help riders, retailers and police identify legal devices. Consistent with RAA's approach to device standards generally, RAA believes maximum power output should be set nationally rather than by individual jurisdictions, noting that views on an appropriate limit are likely to differ between states.

Encouragingly, the Australian Government is acting on this, announcing in August that it has tasked the ACCC with drafting new national product safety standards for e-bikes, e-scooters and e-skateboards, covering speed and power limits, battery safety, and consumer information requirements. RAA considers this the appropriate mechanism for setting a national power cap.

This is a different lever to the import standard RAA recommends elsewhere in this submission. The import standard determines whether a device can enter

Australia and be sold as a bicycle at all; the ACCC's product safety standard governs what can legally be supplied to a consumer regardless of how the device reached the market and can reach devices modified after purchase or assembled domestically, which an import control alone cannot. RAA supports both, and a nationally consistent power cap under either mechanism also reduces the risk that state-specific restrictions are simply overridden after purchase.

A3. Minimum age

RAA supports retaining the current minimum age of 16 years for PMD riders. RAA does not support reducing the minimum age below 16 years. RAA's campaign highlights that one in three e-scooter fatalities in Australia involve a child, according to research by Associate Professor Milad Haghani at the University of Melbourne. This underscores the importance of the existing age limit and the need for stronger parental awareness and enforcement.

RAA's roundtable found mixed views on age limits. Participants identified a meaningful difference in risk profile between device types and between footpath and road use. This supports retaining the current limit while investing in enforcement and parental education.

A4. Access and speed limits

RAA supports the current speed and access framework for PMDs: 10 km/h on footpaths and shared paths, 25 km/h on bicycle lanes and roads at or below 50 km/h, and 25 km/h in bicycle lanes on roads with a speed limit up to 60 km/h, for e-scooters only. This framework was informed by national NTC modelling and SA's own trials.

The problem is compliance, not the framework. RAA's research found that footpath speed is the top safety concern for South Australians, with 71% expressing concern, yet awareness of the actual limits is low. RAA's recommendations on enforcement action to address this are set out at A1.

To help strengthen compliance, RAA believes the Government should install advisory speed reminder signage in high-conflict shared path locations. RAA also proposes a passing-pedestrians speed limit, which would apply across all riders, including e-bikes and bicycles, which is addressed in more detail at B3.

A6. Seizure and destruction of illegal devices

RAA believes SAPOL should have expanded powers to seize and destroy non-compliant PMDs, consistent with powers already in place in Western Australia and more recently Queensland. RAA's road safety roundtable supported visible and publicised enforcement actions, identifying seizure and crushing as a powerful deterrent.

RAA has not formed a view on the specific scale of enforcement resourcing required but considers that enforcement activity is likely to have greatest impact when conducted alongside education campaigns and timed to coincide with seasonal peaks in usage and major events such as the Adelaide Fringe Festival, the AFL Gather Round, LIV Golf and MotoGP.

A7. Drug and alcohol testing

RAA supports providing SAPOL with powers to conduct drug and alcohol testing for PMD riders. The roundtable identified impaired riding as a significant factor in serious PMD crashes, particularly single-rider e-scooter incidents linked to alcohol, though the current reliance on observable impairment makes the true scale of the problem difficult to quantify. RAA recommends this be supported by a review of crash data on impaired PMD riding, and that RAA's position extends this same testing power to e-bike and bicycle riders (see B4).

A8. Hire scheme considerations

RAA supports the continuation of hire schemes. Safety interventions that should be considered include:

- Mandatory replacement standards for hire scheme helmets following any impact or crash.
- Geofenced parking zones in the CBD to prevent devices blocking footpaths and pedestrian infrastructure.
- Consideration of seated e-scooter designs for hire fleets, given the stability advantages over stand-up models.
- Support for hire fleets that embody safety features such as autonomous speed management, geofencing and remote parking, assessed on their merits.

A9. Full-face helmets

RAA's *Don't bury your head in the footpath* campaign actively encourages wearing of full-face helmets, noting that Queensland research from the Jamieson Trauma Institute and RACQ found 50% of children seriously injured on e-scooters suffer head injuries.

The safety case for full face helmets is real: RACQ's crash-dummy testing and hospital data show facial fractures are common and severe in e-scooter collisions. Over a quarter of facial fracture cases in the Royal Brisbane and Women's Hospital study required maxillofacial surgery, and facial fractures occur more often in e-scooter riders than cyclists. 74% of e-scooter users in RACQ's own survey recognise full-face helmets offer better protection. Some peer bodies, including the Queensland Nurses and Midwives Union and the Australasian College of Road Safety have recommended a mandate.

While full face helmets offer better protection, no Australian jurisdiction currently mandates one; all require only an approved bicycle-standard helmet, with Queensland and WA also permitting a motorbike helmet.

Queensland heard the strongest possible case for a mandate, including RACQ's own crash-dummy testing and RBWH facial injury data, and its government still chose a permissive rather than prescriptive approach.

Queensland's transport regulator told that state's inquiry the core problem is low compliance with the existing helmet rule, not the adequacy of standard helmets, and warned a full-face mandate could reduce compliance further.

RAA's own roundtable raised the same concern for hire schemes specifically. Fewer riders wearing any helmet is a worse safety outcome than more riders wearing a standard one. Queensland Health also raised clinical concerns about added neck strain in children, reduced situational awareness, and infection control risks in shared hire helmets, and University of Queensland research found riders wearing full-face helmets tend to ride faster, which can offset some of the protective benefit a mandate is meant to deliver. Operators and advocates have also warned a mandate creates comfort, climate and cost barriers that could suppress ridership.

RAA's roundtable separately raised concerns about a de-humanisation effect and identity concealment. These concerns do not diminish the protection case for full-face helmets, but combined with the compliance, clinical and ridership evidence above, they support RAA's view that a regulatory mandate requires a stronger evidence base before implementation.

While not recommending full face helmets become mandatory, RAA supports active public encouragement of full-face helmets through education and campaigns.

RAA would also support government-commissioned research into the safety impacts of full-face helmet use for stand-up e-scooter riders and to revisit the question of introducing a mandatory full-face helmet requirement once this work is completed.

Part B: E-Bikes (Power-Assisted Bicycles)

RAA supports e-bikes as a legitimate and valuable transport mode. E-bikes are increasingly popular in South Australia. RAA's survey found 13% of households already own one, and 17% of non-owners intend to purchase within 12 months. They play an important role for commuters, people with limited mobility, and anyone seeking a practical alternative to the car.

The critical distinction in the current e-bike framework is between compliant e-bikes and everything else.

Compliant devices are treated as bicycles, not requiring registration or a licence, while non-compliant devices sit outside this framework entirely and raise a different set of risks.

The sections below address this distinction and its consequences in turn: B1 considers whether SA's compliance standard is fit for purpose, B2 addresses the minimum age question, a distinct policy judgement about rider capability rather than device classification, B3 and B4 cover speed, access and rider safety, and B5 addresses non-compliant devices specifically, including registration, enforcement and retailer accountability.

B1. Adoption of EN15194 Standard: Mandatory, Not Voluntary

RAA supports South Australia adopting EN15194 as the sole mandatory compliance standard for e-bikes, replacing the dual PAPC/EPAC framework (the Commonwealth's Power-Assisted Pedal Cycle and Electrically Power-Assisted Cycle categories, introduced in 2021 as domestic alternatives to EN15194). Until import standards are binding, state-level enforcement will always be managing the consequences of a federal gap rather than addressing the source of the problem.

What EN15194 requires

EN15194 is the European Standard for electrically power-assisted cycles (pedelecs), developed by the European Committee for Standardisation (CEN) and the benchmark for e-bike safety regulation globally. To comply, an e-bike must:

- Have a maximum continuous motor output of 250 watts.
- Operate on a pedal-assist basis only. The motor engages only when the rider is actively pedalling.
- Automatically cut motor assistance when the rider reaches 25 km/h, or stops pedalling above 6 km/h.
- Allow motor operation without pedalling only at walk-assist speeds up to 6 km/h.
- Meet specific structural requirements for brakes, frame integrity, and wheel minimum sizes.
- Meet rigorous battery and electrical safety requirements, including thermal runaway protection, battery management systems, and fire safety measures.
- Include anti-tamper design provisions that make it significantly harder to modify the device to exceed its speed or power limits.

Why import standards are the critical gap

EN15194 was Australia's single national e-bike standard until 2021, when the Commonwealth Government replaced it with the domestic PAPC and EPAC categories. While EPAC closely mirrors EN15194, neither category requires

compliance with EN15194's battery safety, anti-tamper, or structural provisions. These are the elements most material to fire risk, crash severity, and enforcement.

The result has been a proliferation of non-compliant devices. High-powered electric motorcycles, some capable of 50 km/h or more, are marketed and sold as e-bikes because the looser domestic definitions create ambiguity that importers exploit. Many are also designed to be easily modified after purchase, with speed-limiting firmware that can be disabled via a smartphone app.

In December 2025, the Commonwealth Government reinstated EN15194 as the reference standard, but on a voluntary basis only. Non-compliant devices continue to enter the market legally.

RAA supports SA adopting EN15194 as the sole state compliance standard and advocating to the Commonwealth for a mandatory national import standard for several reasons:

- **Simplicity and enforceability:** EN15194 is a single standard with a recognisable compliance mark. A police officer or retailer can check for certification without needing to measure wattage or weight.
- **Battery and fire safety:** EN15194's battery management and thermal safety requirements are materially stronger than the PAPC or EPAC definitions, providing an important line of defence against lithium-ion battery fires.
- **Anti-tamper protections:** EN15194 requires manufacturers to design devices so that speed and power limits cannot be easily overridden, meaning a legally purchased device cannot simply be modified to behave like a motorcycle.
- **National harmonisation:** Western Australia has already adopted EN15194 in state law. SA adoption, combined with advocacy for a mandatory federal standard, would establish a coherent national framework.

Adopting EN15194 would remove the PAPC category. Some existing PAPC-compliant devices may not qualify under EN15194, and a transition arrangement for existing owners would be appropriate.

B2. Minimum age and registration

Minimum age

RAA has considered the arguments for and against a minimum age limit for e-bike riders and recognises this is an issue where views will differ. On balance, RAA believes a minimum age of 16 years for all e-bike riders would improve safety and provide a consistent age threshold across both e-bike and e-scooter devices for the public to remember and for SAPOL to enforce.

Western Australia already applies a 16-year minimum age. Queensland recently moved from no age limit to 16, following 12 deaths and 6,300 e-mobility injuries in 2025, a decision informed by its own parliamentary inquiry and more than 1,200 submissions. This decision was backed by Queensland Health, Kidsafe Queensland, the Australian Medical Association Queensland, and the Queensland Family and Child Commission, which cited American Academy of Paediatrics guidance on children's capacity to safely operate powered devices. The AMA (SA) publicly called for e-bike age restrictions in May 2026.

RAA's own research found 70% of South Australians support a minimum age for e-bike riders, with 16 the clear plurality preference at 36%, and found that 83% of South Australians either believe a minimum age already applies or are unsure, meaning a 16-year threshold closes a gap the public largely already assumes is closed.

RAA notes Queensland's committee reasoning was a general capability argument, that children under 16 do not yet have the cognitive or motor capability to safely operate powered devices in dynamic traffic environments.

RAA has weighed this against a genuine trade-off. The SA Government's own discussion paper notes a minimum age could limit some children's access to e-bikes, including those who rely on them for independent mobility, and RAA does not dismiss this concern. Bicycle Industries Australia told the Queensland inquiry that the sector wants more people riding, not fewer, and warned that adding regulatory barriers risks unintended consequences for active transport uptake.

RAA considers the safety evidence sufficient to justify an age limit despite the mobility impact on younger riders raised above. The age of sixteen appears to be the benchmark and drew the largest share of support among South Australians surveyed at 36%, but 15-and-under and 18 each still drew 14%. Queensland's inquiry found a similar split, with submitters who supported an age limit generally recommending either 16 or 18.

RAA also notes RACQ's caution that any age threshold should be considered separately from a licensing requirement, and RAA is not recommending that a licence be required to ride a compliant e-bike.

RAA recognises the challenges with enforcing an age limit. It is difficult for SAPOL to proactively detect and underage rider, with no ID check built into riding an e-bike, no registration plate to run, and no device marking that indicates age. In practice, enforcement depends on an officer already having a rider stopped for another reason, such as a helmet or speeding offence. However, a clear legal standard, backed by parental accountability, is preferable to no standard at all, even if proactive detection remains limited.

On balance, RAA considers the safety case, the weight of interstate and clinical evidence, and the fact that the public largely already believes a limit exists, outweigh the mobility impact on younger riders.

Registration of non-compliant devices

RAA does not support creating a new legal pathway for bikes that do not meet the EN15194 standard or existing motor vehicle and motorcycle requirements. Where a device meets an existing category, for example as a moped or light motorcycle, it must be registered accordingly, bringing licensing, insurance and the full suite of motor vehicle enforcement powers with it. Where it does not meet any existing category, it is illegal to use on public roads and paths.

B3. Speed limits on footpaths and shared paths

Currently, e-bike riders on footpaths and shared paths are subject to the same rules as cyclists: They must keep to the left, give way to pedestrians, and travel at a speed that allows them to stop safely to avoid a collision. This differs from the fixed 10 km/h limit that applies to PMD riders on the same footpaths.

RAA considers this difference to be appropriate given PMDs present different safety risks to e-bikes. E-bikes have bicycle-style wheels and a seated, pedal-based riding position, giving them a stability profile closer to a conventional bicycle. Stand-up PMDs, by contrast, are more susceptible to instability from smaller wheels and a higher centre of gravity.

For these reasons RAA does not support a low, walking-pace speed limit for e-bikes on footpaths and shared paths, such as the 10 km/h limit that applies to PMDs. Many of Adelaide's key cycling routes, including the Mike Turtur Bikeway, the Westside Bikeway, the River Torrens Linear Park Path, and the Park Lands trails, rely on footpaths and shared paths for some or all of their length. A limit set at that pace would make these routes impractical for commuters and other riders travelling within the rules.

RAA also notes that if such a low limit were applied to e-bikes, the same reasoning would logically extend to conventional bicycles, given the two present a similar risk profile to other path users. RAA does not support that extension either, for the same reason.

However, RAA does support one targeted exception to this behaviour-based approach: a mandatory 10 km/h speed limit that applies specifically when a rider is passing a pedestrian on a footpath or shared path, rather than a blanket limit across the entire path.

A rider travelling at a normal cycling pace on a quiet, clear path is not the safety concern the current framework needs to address. The concern is speed at the point of interaction with a pedestrian, and a passing-

specific limit targets that moment directly. This approach reflects a similar concept raised by Brisbane bicycle user groups to the Queensland inquiry, namely a footpath limit that applies only in busy pedestrian areas or when pedestrians are present and is broadly consistent with OECD guidance recommending a 6 to 10 km/h limit where riders share space directly with pedestrians.

RAA also believes consideration should be given to an upper speed ceiling for all devices on footpaths and shared paths. This is a distinct concept from the low, walking-pace limit RAA opposes above but one that would limit excessive speed to improve safety for all path users.

B4. Drug and alcohol testing for e-bike and bicycle riders

RAA supports extending drug and alcohol testing powers to riders of e-bikes and conventional bicycles operating on roads or shared paths, consistent with the powers RAA recommends for PMD riders.

Impaired riding at speed on shared infrastructure presents a real safety risk regardless of device type and RAA do not consider that risk to depend on whether a device is a compliant pedelec, a non-compliant e-bike, or an ordinary bicycle. Extending testing powers consistently across all these riders closes a gap in the current framework, which otherwise only allows testing of motor vehicle drivers.

B5. Non-compliant devices: Registration, seizure and import controls

The single most important safety issue in the e-mobility space is the modification and importation of non-compliant devices. High-powered throttle e-bikes, modified pedelecs with disabled speed limiters, and petrol-engine bikes marketed as e-bikes are not e-bikes. They are unregistered motorcycles and should be regulated accordingly.

As set out above, RAA does not support a new registration pathway for non-compliant devices. They should instead be assessed against existing motor vehicle and motorcycle categories, which brings the relevant licensing, compulsory third party insurance and enforcement consequences where a category applies.

In addition to registration requirements, RAA supports:

- SAPOL powers to seize and destroy non-compliant devices, with publicised enforcement actions to maximise deterrent impact, consistent with existing WA powers and endorsed by RAA's roundtable.
- Mandatory federal EN15194 import compliance, as the primary upstream intervention to reduce the volume of non-compliant devices entering the Australian market.

- Strengthened point-of-sale obligations on retailers to display device specifications and EN15194 compliance status clearly, with penalties for retailers who misrepresent non-compliant devices as legal e-bikes.
- Consider applying existing motor dealer licensing requirements to retailers selling high-powered non-compliant devices, consistent with SA's current treatment of these devices as motor vehicles for enforcement purposes.

Part C: Cross-Cutting Issues

C1. Infrastructure investment

RAA believes the SA Government should invest at least \$10 million each year into a dedicated infrastructure fund to support safer cycling and the use of e-mobility devices. This commitment is a core element of RAA's 2026 State Election Platform and should be supported by a State Cycling Strategy.

South Australia currently allocates less than 1% of the state transport budget to cycling infrastructure, and Adelaide ranks last among peer cities for the quality of its bike network, according to the Committee for Adelaide's 2025 Benchmarking Report.

RAA's roundtable identified the lack of a coordinated, state-level active transport network as a fundamental barrier to safer cycling and PMD use. Infrastructure is frequently built piecemeal, design standards vary across local government boundaries, and there is no overarching state active transport plan.

RAA believes the SA Government should:

- Invest at least \$10 million per year into a dedicated cycling and e-mobility infrastructure fund, supported by a State Cycling Strategy.
- Take a leadership role in planning and part-funding a coordinated, cross-jurisdictional active transport network.
- Allocate additional funding to the State Bicycle Fund directed to dedicated cycling and active transport infrastructure.
- Prioritise the completion of the Gawler Greenway, a bridge connecting the Royal Adelaide Hospital to the River Torrens Linear Path, and a continuous shared-use path along Greenhill Road in the Adelaide Park Lands, including the section between Fullarton Road and ANZAC Highway, to provide a low-stress, full-time cycling alternative to the existing part-time on-road cycle lanes.
- Invest in separation of shared-use paths in high-conflict locations and consider using advisory speed reminder signage where full separation is not cost-effective.

- Review road design standards for intersections and crossing points to ensure safe sight triangles reflect PMD travel speeds, not just pedestrian walking speeds.

C2. Hire scheme helmets

RAA supports the continuation of hire schemes subject to appropriate safety conditions. RAA's roundtable identified a specific concern about hire scheme helmet standards. Helmets involved in a crash may offer significantly reduced protection in a subsequent impact if not replaced. RAA supports mandatory replacement standards for hire scheme helmets following any impact or crash, and clear inspection and replacement protocols for commercially operated PMD fleets.

C3. Battery safety and fire risk

The growing incidence of lithium-ion battery fires associated with e-mobility devices is a significant community safety risk. RAA recommends:

- A public education campaign on safe charging, storage, and handling of e-mobility device batteries.
- SA supporting the adoption of NSW's 'declared electrical article' requirements for e-mobility device batteries nationally, to ensure products meet minimum safety standards before sale.

C4. Crash data and reporting

SA crash data records e-scooters and e-bikes as separate vehicle categories but does not distinguish between compliant and non-compliant devices. Single-rider PMD crashes are significantly underreported, while illegal e-bikes may be classified as motorcycles in crash and insurance data, distorting motorcycle risk profiles.

RAA recommends:

- The SA Government work with SA Health and SAPOL to develop a more comprehensive e-mobility crash data collection framework, including mechanisms such as hospital data linkage or hire operator incident reporting requirements.
- A review of how e-mobility crashes are classified in crash and insurance data systems.
- Regular public reporting on e-mobility crash trends, including device type, rider age, and contributing factors.

C5. Insurance and personal liability

Many PMD riders are unaware they have no personal liability cover in the event of a crash causing injury to another person. Compliant PMDs and pedelec e-bikes are treated as bicycles and carry no CTP requirement, so a rider at fault in a collision is personally liable, with recourse generally limited to their own household or cycling-membership cover, if any is held.

Other jurisdictions are moving cautiously on this. NSW is exploring options for an e-micromobility insurance scheme following its parliamentary inquiry, though no scheme has been announced. Queensland's reforms bring non-compliant, higher-speed devices into the existing motorbike registration and CTP framework, but compliant e-bikes and PMDs remain outside CTP, consistent with bicycles. The Insurance Council of Australia has backed bringing registrable non-compliant devices into CTP, and separately flagged battery fire risk as a related concern for home and contents insurance.

RAA currently does not support extending CTP to compliant PMDs and e-bikes, and will continue to monitor developments in other jurisdictions, including NSW's scheme design work. Voluntary, membership-based personal liability and accident cover is already offered by some insurers interstate, demonstrating a viable market-based option in the interim.

RAA does believe there needs to be more clear public information on the insurance and personal liability implications of PMD use.

C6. E-scooters and e-bikes on public transport

RAA has no in-principle objection to e-scooters and e-bikes being carried on public transport. Compliant devices support genuine connectivity to the rail network for longer commutes, and trains generally have space to accommodate a stowed device without affecting other passengers, while buses do not, unless dedicated bike racks were installed, as used in some other jurisdictions.

Western Australia and Victoria draw a similar line on device access: standard e-bikes and e-scooters are permitted on trains, while buses require devices to be folded. Victoria's approach, settled in December 2025, is the most recent and directly comparable reform, and also applies the foldable-only requirement to trams. WA's rule predates the current battery safety debate entirely and is really a general stowage rule rather than a fire-safety measure, which may carry less weight with a government whose consultation is focused specifically on battery risk.

NSW reached a related but narrower outcome, restricting only non-compliant, converted devices rather than banning by mode at all, meaning the two most recent reforms actually regulate by device compliance rather than by transport type. Queensland's committee reached no settled position; the only concrete view on the table there is the Rail, Tram and Bus Union's, which called for banning devices across buses, trains and trams alike until national standards are in place.

RAA also recognises that splitting the rule by mode adds complexity for multi-leg journeys and requires station or depot staff able to check compliance, a genuine operational cost. On balance, RAA's view is that

the capacity and connectivity case for a train-permissive, bus-restrictive split remains the stronger position, but Government should weigh this evidence in settling final rules.

Battery fire risk

Battery fire risk is RAA's primary safety concern with allowing these devices on public transport, particularly in an enclosed carriage or bus with limited means of escape (see also C3). This is a technical fire safety question, and RAA considers it should be assessed by fire safety experts such as the Metropolitan Fire Service, rather than settled by RAA or the transport network alone.