Submission No 144

INQUIRY INTO USE OF E-SCOOTERS, E-BIKES AND RELATED MOBILITY OPTIONS

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Date Received: 16 August 2024

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14th August 2024

New South Wales Legislative Council's Portfolio Committee No. 6
Transport and the Arts

Inquiry into the use of e-scooters, e-bikes (including shared schemes) and related mobility options

E-bikes and e-scooters present an attractive and potentially cost-effective solution for councils aiming to manage short-distance travel, especially for connecting to or from public transport options, often referred to as "the last mile." While these devices offer benefits for both riders and the environment, they also pose significant challenges and risks for both users and the broader community.

In New South Wales, e-scooters are not currently allowed on roads and bicycle lanes due to unresolved issues in a similar way to those faced by e-bikes. Currently, neither e-bikes, e-scooters, nor share operators require contracts, licensing, registration, or insurance, as they are classified as "low-speed devices" with a maximum speed of 25 km/h. However, shared e-bikes have become a common sight in Sydney, cluttering public spaces and left carelessly on streets and pavements, creating hazards for pedestrians and those with disabilities, while detracting markedly from the city's aesthetics.

In Melbourne, where shared operators of e-bikes have failed due to low uptake, e-scooters have now been banned, before the completion of a two year trial, due to 'unacceptable safety risks' (https://www.theguardian.com/australia-news/article/2024/aug/13/melbourne-e-scooter-ban-council-meeting-trial?CMP=Share_AndroidApp_Other). The Council's contracts with operators will be cancelled. Councellor Capp is quoted as stating, 'Unfortunately, it's residents worried about safety on our pavements, it's traders worried about their customers stepping into and out of their stores, [and] it's people with disabilities concerned about the way that they are parked across our pavements' (https://www.southbanklocalnews.com.au/lord-mayor-calls-for-safer-e-scooter-use-as-operators-face-ban-if-they-cant-meet-minimum-standards/).

It is of critical importance that E-scooters are not permitted on roads and bicycle lanes in New South Wales until the existing substantial concerns surrounding e-bike usage are adequately addressed.

The utilisation and impact of e-mobility devices in the community

The dangers of e-bikes

The number of e-bike accidents has increased in parallel to their growing popularity. E-bike riders are more likely to *sustain and cause internal injuries, concussions, and fatalities* to themselves and pedestrians when compared to traditional bike riders. This is because e-bikes are both faster and heavier than traditional bicycles. In New South Wales, e-bikes can reach speeds of up to 25 km/h, while standard bicycles typically travel at around 17 km/h. Additionally, e-bikes weigh between 5 to 15 kg more than conventional pedal-powered bikes.

The rise in e-bike usage has been accompanied by an increase in accidents, highlighting the risks associated with these vehicles:

Increased Risk of Internal Injuries: A study examining emergency department data from 2000 to 2017 (https://www.knowleslawfirm.com/electric-bike-accident-statistics/) found that 17% of e-bike accidents in New York resulted in internal injuries, compared to just 7.5% for pedal bikes and powered scooters. This and other studies indicate that e-bike accidents are more than twice as likely to cause internal injuries.

Higher Incidence of Traumatic Brain Injuries: E-bike accidents have a higher rate of traumatic brain injuries compared to traditional bicycle accidents (https://worldmetrics.org/e-bike-accident-statistics/). Additionally, e-bike accidents are more likely to result in concussions than those involving traditional bicycles (https://www.knowleslawfirm.com/electric-bike-accident-statistics/).

Collisions with Pedestrians: E-bikes are more than three times as likely to collide with pedestrians compared to pedal bicycles or powered scooters (https://www.knowleslawfirm.com/electric-bike-accident-statistics/).

Collisions with Commuters: The weight of e-bikes poses risks for commuters on public transport, as they are less manoeuvrable than traditional bikes and can cause more damage if swung into an unsuspecting passenger.

Severity of Injuries: E-bike riders face a higher risk of severe injuries in accidents compared to conventional bicyclists (https://www.knowleslawfirm.com/electric-bike-accident-statistics/).

Fatalities: While specific comparative data on fatalities is limited, e-bike accidents are generally more severe (https://worldmetrics.org/e-bike-accident-statistics/). Between 2017 and 2021, there were 53 e-bike fatalities in the US, and approximately 900 people die annually worldwide due to e-bike accidents (https://atleehall.com/e-bike-accident-statistics-how-dangerous-are-they/).

The dangers of E-scooters

E-scooter regulations differ widely between countries, and improper use has increased both the frequency and severity of accidents. A 2021 literature review (https://australasiantransportresearchforum.org.au/wp-content/uploads/2022/05/ATRF2021_Resubmission_38-1.pdf) highlighted international studies indicating that both footpath and on-road e-scooter riding present safety risks to various road users. Key issues include weak law enforcement and insufficient awareness of existing laws.

In Queensland, e-scooters are categorised as personal mobility devices, classifying riders as pedestrians. This classification means e-scooters cannot be used on roads or in bike lanes unless these are separated cycleways with a marked, raised barrier. However, they are allowed on pavements. Due to their weight (ranging from 15 kg to 70 kg for heavy-duty models) and speed (up to 25 km/hr, though they can be modified to go faster), e-scooters pose significant injury risks to pedestrians.

High Risk of Accidents: The rapid proliferation of e-scooters, similar to e-bikes, has led to a substantial rise in injuries (https://www.theguardian.com/australia-news/2023/dec/20/emergency-doctors-call-for-tighter-controls-on-e-scooters-as-melbourne-injuries-skyrocket; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9533239/), resulting in increased hospital visits and public costs (https://www.unsw.edu.au/newsroom/news/2024/02/e-scooters-are-linked-with-injuries-and-hospital-visits---but-we). The primary injuries are upper limb fractures, mainly caused by falls, with a majority of riders not wearing helmets (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9533239/).

Nearly 25% of injured individuals were under the influence of alcohol, and 20% under the influence of drugs like marijuana and cocaine. Overall, 68% of those injured were not wearing helmets, and 5.6% were under 18, the legal age for e-scooter use in most U.S. jurisdictions. Additionally, nearly 30% of injuries occurred during the rider's first e-scooter experience.

Fatalities: Moreover, illegal modifications can increase e-scooter speeds, leading to fatal accidents. In September 2023, an e-scooter rider in Melbourne was killed while traveling at 50 km/hr; the scooter model could be modified to reach speeds of 60 km/hr (https://www.theleader.com.au/story/8707547/e-scooter-speeds-to-be-probed-by-coroner-after-death/). The rider was not wearing a helmet (https://www.smh.com.au/national/victoria/melbourne-e-scooter-rider-who-died-was-travelling-at-well-over-20km-h-20221003-p5bmth.html).

Cities worldwide are striving to balance safety concerns, legal requirements, and the goal of promoting bike-sharing as an accessible and convenient transportation option. Effective regulation and strict enforcement are crucial to achieving this balance. However, the stringent regulations needed to ensure the safe operation of shared e-bikes and e-scooters have often rendered these services unviable for operators.

Inexperienced riders face increased risks with e-scooters due to several factors:

- **Higher Speeds:** The combination of higher speeds and the additional weight from the battery, motor, and sturdier frame materials can lead to a loss of control.

- **Throttle Misuse:** Applying too much throttle can cause the bike to lurch forward, potentially resulting in a loss of control.

Common problems involving riders of e-bikes that also apply to e-scooters

- **Poor adherence to road rules** is a significant issue. Shared and private e-bikes, as well as those used by delivery personnel, are often *illegally ridden on pavements*, posing a critical danger to pedestrians and those on mobility scooters.

- **Compliance with mandatory helmet laws** is also lacking. The dangers of e-bikes to riders, particularly when helmets are not worn, are well-documented (https://www.npr.org/sections/health-shots/2024/02/21/1232912369/e-bike-head-trauma-soars-as-helmet-use-falls-study-finds; https://www.tomsguide.com/wellness/fitness/e-bike-riders-arent-wearing-helmets-and-head-trauma-cases-are-through-the-roof). Young e-bike and e-scooter riders are more likely to illegally carry pillion passengers, often without helmets, increasing risks to both themselves and the public.

- Studies and reports indicate that young e-bike and e-scooter riders are more likely to **engage in risky behaviours** such as over-speeding, running red lights, and illegal manned riding, which includes carrying passengers illegally (e.g. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6651001/; https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1277378/full; https://www.birmingham.ac.uk/news/2023/one-in-four-e-scooter-users-admit-riding-under-the-influence).

- Bicycle riders of all types frequently **run red lights, use mobile phones while riding, and ride when intoxicated, or with intoxicated passengers** without consequence. This behaviour increases the risk of collisions for e-bikes and e-scooters, which are more hazardous than lighter, pedal-powered bicycles. (e.g. https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1277378/full; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6651001/).

- **Lithium-Ion batteries can overheat, catch fire, or explode if damaged, improperly used, or charged incorrectly.**

Lithium-ion batteries present additional hazards as they can overheat, catch fire, or explode if damaged, improperly used, or incorrectly charged. Fires from these batteries are highly toxic, extremely intense, and difficult to extinguish. Despite

compliance with Australian standards to mitigate risks, the number of lithium-ion battery fires caused by e-bikes and e-scooters has been increasing.

ABC News reported that lithium-ion batteries caused over a thousand fires in Australia in 2023, with Fire and Rescue NSW tackling 63 such fires by mid-March 2024, leading to seven injuries and two deaths (https://www.abc.net.au/news/2024-03-13/lithium-ion-fires-recycling-plants-trucks-vapes-exploding/103582110).

A Guardian report noted that e-transport devices accounted for half of all injuries from lithium-ion battery fires in NSW in 2023, partly due to faulty chargers or amateur modifications (https://www.theguardian.com/australia-news/2024/mar/15/growing-safety-concerns-over-lithium-ion-batteries-after-four-fires-in-one-day-in-nsw_). In March, 2024, an e-bike caught fire on the third floor of a 10-storey apartment block at Bankstown, in Sydney's south-west (https://www.fire.nsw.gov.au/incident.php?record=rec19mr6yzVvSQqQ0#:~:text=In%20a%20fourth%20Lithium%2DIon,trucks%20responded%20to%20the%20scene.). Residents were evacuated as 25 firefighters, and four trucks responded to the scene.

Charging e-bikes and e-scooters within apartment buildings is particularly risky, endangering many residents and potentially causing significant property damage. Bulk charging of shared e-bikes is especially hazardous, with toxic fumes affecting a large area.

Fires linked to e-transport devices have endangered lives globally. Notable incidents include a fire at Lime's Seattle warehouse, three fires at Stella E-bikes in the Netherlands, and a significant blaze at a Voi e-scooter warehouse in Bristol, UK, which destroyed over 200 vehicles. Firefighters faced considerable difficulty extinguishing these fires.

On July 21, 2024, The Times reported that various organizations, including companies, universities, NHS Trusts, hospitals, local authorities, and Transport for London, planned to ban e-bikes from being parked or charged on their premises following a surge in serious fires caused by faulty batteries (https://www.thetimes.com/article/ea91d05a-e4ba-4074-af93-033e0807c4bf?shareToken=a22bd335793145b520286f58699ba8c2). This ban would also apply to e-bikes on London Overground trains. The brands of batteries most frequently involved in these fires could not be identified due to the severity of the incidents.

The bulk charging of shared e-bikes is particularly dangerous, with toxic fumes impacting people over a wide area. On January 5, 2024, a fire engulfed an e-bike workshop in Croydon, Sydney's inner west. This commercial space specialising in e-bike sales, rentals, and repairs suffered extensive damage. The fire posed significant challenges for firefighters due to the presence of e-bikes and lithium batteries.

- **Improperly parked shared e-bikes create obstacles on sidewalks and in public spaces,** posing hazards for pedestrians, vehicles, and especially for

people with disabilities, such as wheelchair users or those with visual impairments. These obstructions can hinder mobility and access to public spaces, violating the principles of the Federal Disability Discrimination Act 1992, which aims to ensure equal access to public areas, including pavements.

- **Helmets that come loose from shared e-bikes and roll away** become debris, creating additional hazards for road users and pedestrians, again particularly those with disabilities. The presence of haphazardly left e-bikes and loose helmets detracts from the aesthetic appeal of a city known for its beauty and its ability to attract tourists from around the world.

Safety must be prioritized in addressing these issues. Governing bodies need to implement binding legislation and regulations, along with rigorous enforcement, to prevent introducing further dangers to the community.

The potential benefits of existing regulatory and policy settings and opportunities to improve safety for users and the community

Regulation is currently adequate to address many of the problems of e-bike riding safety and parking, however, enforcement is lacking, placing the public at risk. Transport for NSW makes clear the road rules for all bikes (https://www.transport.nsw.gov.au/roadsafety/bicycle-riders/road-rules-for-bicycle-riders#Helmets_and_equipment). Councils and police currently have the legislative authority and are responsible for enforcing parking and road use rules.

Regulation of riders

Riders of e-bikes are well regulated under the *Road Rules 2014 (NSW)*. For example:

- The use of properly fastened approved helmets have been mandatory for all bike riders (including pillion passengers) since 1991 (https://legislation.nsw.gov.au/view/html/inforce/current/sl-2014-0758; *Rule 256*).
- Cyclists must obey all traffic signals, signs, and road markings just like motor vehicle drivers (e.g. *Rules 20,50,54,69,129,141)*.
- Cyclists are prohibited from riding on the pavement and on a pedestrian crossing (*Rule 248*) unless they are a child (under 16 years of age) or an accompanying adult.
- Cyclists must give way to pedestrians on footpaths and shared paths (*250(2)(b)*). They must also give way at pedestrian crossings and intersections where required (*Rule 81)*.
- The use of a hand-held mobile phone is prohibited, unless it is cradled (*Rule 300*).

- It is illegal to ride under the influence of alcohol or drugs. Cyclists can be charged with riding under the influence if their blood alcohol concentration is over the legal limit for drivers (*Rule 15).*
- Cyclists must not carry more people on the bicycle than it is designed to carry. This means that a standard bicycle designed for one person cannot carry an additional passenger unless it is specifically designed to do so (e.g., a tandem bicycle or a bicycle with a child seat) (*Rule 246).*
- Cyclists must not carry anything that prevents them from having control of the bicycle or from signalling. This means that any object carried must be secured in a way that does not interfere with the cyclist's ability to ride safely (*Rule 245-1*).

Penalties for breaching these rules include fines and, in some cases, demerit points if the cyclist holds a driver's license. The specific penalties depend on the nature and severity of the offense.

These rules are rarely enforced for bicycle or e-bike riders.

Regulation of shared e-bike operators

The Impounding Amendment (Shared Bicycles and Other Devices) Act 2018 No 51 of the *Impounding Act 1993 (the Act)* and *Impounding Regulation 2013 (the Regulation),* (https://legislation.nsw.gov.au/view/whole/html/2018-10-05/act-2018-051) of NSW provides laws specifically for dockless shared bicycle services, placing responsibility for shared bicycles with shared bicycle operators, and permitting the impounding of shared devices causing obstruction or safety risk:

19D Impounding shared devices that are causing an obstruction or safety risk

(1) A shared device is not to be left in a public place in a way that causes an obstruction or safety risk.

(2) An impounding officer may immediately impound a shared device if:

(a) the shared device has been left in a public place, and

(b) the impounding officer believes on reasonable grounds that the shared device has been left in a way that causes an obstruction or safety risk.

(3) An impounding officer may, instead of impounding a shared device under subsection (2), move the device to another place.

(4) An operator of a sharing service must ensure that any shared device owned by the operator that is left in a public place (whether by a user or any other person) in a way that contravenes this section is removed within 3 hours after the operator is notified of the contravention by an impounding officer, user or any other person.

(5) An operator of a sharing service who fails to comply with subsection (4) in relation to a shared device is taken to have abandoned the shared device in a public place.

Shared devices must not remain in the same location for more than seven days. If an operator is notified of a contravention, the device must be removed within four days; otherwise, it is considered abandoned and can be impounded, with a potential fine of $2,750 imposed by the courts. Renting unsafe bikes, including those without helmets, is also an offense under the Act. It is of note that many e-bike helmets left sitting in their baskets are stolen.

The local council serves as the impounding authority. However, impounding officers, if present in the City of Sydney, are not visibly performing these duties. If such officers do not exist, the scope of practice for current Traffic Wardens could be expanded to include responsibilities under the Act and the 2013 Regulation.

Management of excess e-bikes

Currently, there are more e-bikes than necessary to meet demand, leading to obstructions on pavements and creating hazards. It's essential to match the number of e-bikes permitted in an area with actual usage to determine storage needs. This requires regulation through adequate monitoring, restrictions on e-bike numbers in any given area, and the removal of unused e-bikes. Caps should be implemented to ensure that e-bike numbers do not exceed demand and should only be increased if evidence shows unmet demand.

Better use of current legislation

The Office of Local Government has published guidelines for councils on managing shared bicycles under the Act and 2013 Regulation. However, it is evident that further action is needed to effectively manage public safety and amenity. Section 19F of the Act provides provisions to regulate operators' obligations, particularly regarding the safety and maintenance of shared devices, public safety and amenity, risk management, public liability, and the creation of a code of practice with enforceable consequences for non-compliance. This section grants councils wide-ranging powers to regulate shared e-bikes and e-scooters and impose penalties for non-compliance.

Unfortunately, councils in Sydney have not fully utilized Section 19F to ensure public safety and amenity related to e-bikes. For instance, municipalities like Canada Bay, City of Sydney, Inner West, Randwick, Waverley, and Woollahra have issued guidelines for e-bike operators that do not address penalties for non-compliance nor provide recourse for the public when harmed by e-bikes. While regulation needs improvement, adequate legislation exists to enforce proper management of e-bikes.

Consistent and rigorous enforcement is lacking in NSW. Traffic wardens should have the same authority over poorly parked e-bikes as they do with cars, and police should issue on-the-spot fines for road rule violations. For shared e-bike operators and councils to gain public support for the use of shared e-devices in cities, enforcing all regulations is essential.

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Opportunities to reform the regulatory framework to achieve better and safe outcomes for riders and the community: Necessary additional legislation

Licensing

Licensing companies that provide shared e-bikes and e-scooters, as in Melbourne, is crucial for effective regulation enforcement. This enables the government to impose restrictions, revoke licenses, and issue fines as needed. Licensing conditions should be adaptable, allowing for changes without requiring additional legislation. These licenses must include conditions and obligations to protect both the public and users. Licensing has enabled the Lord Mayor of Melbourne to terminate contracts and ban e-scooters due to significant safety concerns.

Bonds

Currently, e-bike companies often import large numbers of e-bikes, primarily from overseas, and deploy them on the streets. If these companies fail, local councils are left with the costly task of disposing of the e-bikes. Therefore, licensees should be required to post bonds to cover potential disposal costs.

Registration of e-bikes and e-scooters

Due to poor compliance among e-bike and e-scooter riders, all such vehicles should be registered with clearly identifiable numbers. This will facilitate greater compliance through enforcement.

Testing of e-bike/e-scooter batteries

The Australian Competition and Consumer Commission recommended battery testing in this sector to ensure safety and reliability. NSW is to be commended for declaring e-bikes, e-scooters, e-skateboards, self-balancing scooters, and the lithium-ion batteries used to power these devices, 'electrical articles' under the Gas and Electricity (Consumer Safety) Act 2017. This means that from February 2025, when sold in NSW these devices will have to comply with the prescribed mandatory safety standards (https://www.nsw.gov.au/housing-and-construction/safety-home/electrical-safety/lithium-ion-battery-safety/new-safety-standards-for-lithium-ion-batteries-e-mobility-devices).

Third Party Insurance

All e-bike and e-scooter riders should be required to carry compulsory third-party insurance. This would provide recourse for individuals harmed by these vehicles and could be included in the cost of hiring shared vehicles from operators.

Education of riders

Registration should be contingent upon completing a safe riding course to ensure riders understand their obligations and the consequences of non-compliance. However, such programs may have limited efficacy in areas with high transient populations, such as tourists or new international students. Adequate signage about requirements and fines for non-compliance is necessary.

Docking and charging

Dockless e-bikes have repeatedly failed in Sydney, yet they are being reintroduced. Mandatory docking stations should be used to park e-bikes between uses, ensuring proper upright parking and applying disincentives for non-compliance with safe storage requirements.

Failing this, **geopositioning** needs to be utilised and integrated with:

- **orientation sensors (Gyroscope and Accelerometer)** that measure the tilt, rotation, and orientation of the bicycle and can infer whether the bicycle is standing upright, lying down, or in some other position; or

1. **cameras or image recognition** that can capture an image of the parked bicycle, and image recognition software could be used to analyse the image to determine how the bicycle is positioned; or

2. **smart bicycle locks** that include sensors to detect movement and orientation. When combined with GPS, these could potentially determine not just where the bicycle is but also how it's parked.

Council-designated spaces for e-bike docking and charging should be located on roads, not footpaths, to emphasize that e-bikes should be ridden on roads and to ensure pedestrian safety, particularly for those with disabilities. These designated parking spaces should be protected by bollards for safety.

Fees should be applied for docking, storage, and parking areas to offset the removal of public spaces and parking capacity for other vehicles, including those of residents. Authorities already have the power to move or impound devices left in dangerous spaces, not removed within the specified time, or not parked correctly. A charge for this service needs to be applied to ensure compliance.

Charging stations, integrated with docking and helmet storage options, can improve compliance with e-bike docking and storage requirements. Additional charging points and storage facilities for delivery vehicles and private e-bikes, particularly for those living in apartments or without garage space, should be incorporated into docking stations.

However, this presents a risk to the public due to potential lithium battery fires when devices are charging. Ideally, fire suppressant measures should be implemented in common charging areas to effectively extinguish fires.

Powers to restrict the parking and charging of e-bikes and e-scooters

Enhanced powers are necessary for businesses, organisations, and strata complexes to prohibit the parking and charging of e-bikes and e-scooters on their properties to

ensure public and resident safety. Such restrictions are already in place in London. (https://www.thetimes.com/article/ea91d05a-e4ba-4074-af93-033e0807c4bf?shareToken=a22bd335793145b520286f58699ba8c2).

Removal of excess shared e-bikes/e-scooters

Operators should be required to maintain a minimum usage rate, such as one ride per bike per day. If there is an oversupply relative to demand, they must withdraw shared e-bikes from service. Removal should be mandatory, and fines should be imposed on e-bikes that remain unused for three days.

Restrictions on areas of operation

E-bikes should be limited to areas with adequate infrastructure, including parking and bike lanes. **Geofencing** should be used to ban shared bikes from tourist, heritage, high pedestrian, and dining areas.

The City of Sydney should clearly designate where shared bikes are permitted, and exclude high foot traffic and heritage areas like The Rocks, Circular Quay, Barangaroo, and harborside parks.

Restricting riding on pavements

Geotechnology, such as GPS tracking and geofencing, can potentially be used to prevent e-bikes from being ridden on pavements, but it is not a straightforward solution. Implementing such technology requires significant infrastructure, investment, and cooperation from e-bike/e-scooter manufacturers and local governments.

Melbourne operators of shared e-scooters, Neuron Mobility, had plans to fit their fleet with ‘artificial intelligence-powered cameras to stop riders travelling on footpaths’ following ‘a six month trial that trained AI to recognise Melbourne’s roads and footpaths’ (https://www.theguardian.com/australia-news/article/2024/jul/11/neuron-e-scooters-melbourne-ai-cameras-safety). The system issued a warning to riders, but could not prevent their continuance of riding on the footpath.

Helmets

Loose helmets create hazards and litter. Helmets must be attached to the shared e-bike rack and monitored. The act of hiring releases the helmet, and the hire is not completed until it is reattached. Fines should be imposed for e-bikes without attached helmets and for loose helmets. Riders not wearing a helmet should receive on-the-spot fines.

Some overseas bike-sharing companies, like Wheels, equip their bikes with helmets that lock to the rear rack and provide a fresh liner for each use. This aims to increase the use of helmets.

Dedicated bicycle infrastructure

There's a growing focus on creating safer cycling infrastructure, which is challenging for some cities, such as Sydney, due to the terrain and development constraints that do not allow for complete separation of pedestrians and e-bike riders. The increasing

popularity of e-bikes and e-scooters is raising new safety concerns on protected bike paths for standard bicycle riders, due to their higher speeds and weight.

However, a study examining data from 12 major US cities over 13 years found that cities with protected bike lanes had 44% fewer deaths and 50% fewer serious injuries among all road users (https://theprogressplaybook.com/2023/11/20/13-year-study-finds-protected-bike-lanes-make-roads-safer-for-everyone/).

Shared pedestrian/bike paths are, however, unsafe (e.g. Mesimäki and Luoma (2021, https://www.researchgate.net/publication/352894979_Near_accidents_and_collisions_between_pedestrians_and_cyclists).

Monitoring of the database

Shared e-bike operators must transparently share data on locations, usage, parking, and safety issues with statutory authorities and the public as a licensing condition. Regular feedback should be collected from council rangers, parking officers, police, public transport drivers, and the community to ensure standards are upheld.

Enforcement

Without enforcement, rules and regulations are ineffective, and the public suffers. Proper authorities need to be identified and empowered to issue on-the-spot fines for legal breaches. The Environment Protection Agency reporting system needs to be updated to include e-bikes, e-scooters, and loose helmets that have been abandoned and become rubbish. Operators should fund compliance costs for regulatory authorities and demonstrate adherence to licensing rules before renewal, as required in other businesses.

The potential risks of existing regulatory and policy settings

Helmets

Shared e-bike companies have previously failed under similar circumstances. Melbourne Bike Share, launched in 2010 with 51 stations and 600 e-bikes owned by the government. It was operated by the RACV to serve the CBD, but was shut down in November 2019. It never achieved its target of 25,000 trips per month, with the mandatory helmet law cited as a primary reason for its failure (*Lucas, Clay (23 July 2010). "Helmet law makes nonsense of bike hire scheme". The Age; "Queensland helmet law". Bicycle Helmet Research Foundation).*

Australia enforces mandatory helmet laws for all cyclists across all states and territories. In NSW, cyclists without approved helmets face an on-the-spot fine of $344, though this law appears inconsistently enforced for e-bike riders.

Cities like Paris, where e-bikes are successfully integrated with strong infrastructure, do not require helmets. However, riding without a helmet nearly doubles the risk of head trauma. A study reported a nearly 50-fold increase in head trauma cases among e-bike riders from 2017 to 2022, with 66% of those injured not wearing helmets (https://www.tomsguide.com/wellness/fitness/e-bike-riders-arent-wearing-helmets-and-head-trauma-cases-are-through-the-roof).

Research from Tel Aviv Sourasky Medical Center (https://www.jpost.com/health-and-wellness/article-723716) found that over 70% of patients with facial injuries from electric bikes and scooters were not wearing helmets, often resulting in serious facial bone fractures. Without helmets, traumatic brain injuries and severe facial injuries are more likely.

Where protective helmets are not worn traumatic brain injuries (TBI) and severe facial injuries are more likely (https://www.jpost.com/health-and-wellness/article-723716; https://xnito.com/blogs/our-news/rising-e-bike-injuries-underscore-the-urgency-of-helmet-safety).

Mandatory helmet use must be retained

Regulations and competition

In 2018, companies like ReddyGo, ofo, and oBike ceased operations in Sydney due to regulatory compliance issues and operational challenges, including bike maintenance, vandalism, and managing a dockless system. Issues related to e-bike parking led the NSW Government to amend the Impounding Act. The market for bike-sharing services also became saturated, resulting in intense competition and difficulties in maintaining profitability.

In Summary

E-bikes can significantly contribute to affordable and accessible mobility, particularly solving the "last mile" problem by improving access to public transport. While traditional cycling offers more intense exercise, e-bike riding still provides considerable health benefits. The health benefits of e-scooter riding are less clear, offering minor advantages through standing and balancing. However, the current usage of e-bikes poses challenges for public safety, and without addressing these issues, the venture may fail again.

Essential reforms include:

Existing regulatory measures need to be utilised to enhance public safety while further necessary regulations are developed.

A system of licencing needs to be introduced for participating firms to give more strength to regulation.

An open database must be shared by the firms, the regulatory authorities and the public. This to be a condition of licencing

The current shared e-bike operations are, however, a disaster for the public, and the venture is likely to again fail.

Yours sincerely,

Dr Judy Hyde
Highgate Submissions Officer
* *on behalf of Owners Corporation Strata Plan 49822*