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# Position Paper on Electric Vehicles

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## Background

In recent years, electric and hybrid vehicles – known collectively as Quiet Road Transport Vehicles (QRTV) – have formed an increasingly significant part of Australia’s road traffic. This trend is likely to continue, with the Australian Government releasing the first National Electric Vehicle Strategy in April 2023[[1]](#endnote-1).

While Blind Citizens Australia (BCA) welcomes measures that will help address concerns about rising fuel scarcity and the environmental impact of carbon emissions from combustion engines, we have serious concerns around the potential of these vehicles to severely compromise the safety of all pedestrians – especially people who are blind or vision impaired.

## Issues and Concerns

Historically, the sounds emitted by road traffic has enabled pedestrians who are blind or vision impaired to travel with relative safety and independence when crossing roads and using footpaths. A study on the built environment from Western Michigan University notes:

“Traffic flow can tell a person whether a street is one way or two way, how wide a street is, how close a person is to an intersection, and how close a person is to the street. All of these bits of information, combined with knowledge of how a city is laid out, allows a person to determine approximately where they are and perhaps even what direction they are walking.”[[2]](#endnote-2)

This information has been used by people who are blind or vision impaired for decades, with specific knowledge, techniques and skills being developed and taught by orientation and mobility specialists to help take advantage of that traffic flow information. However, as technology improves and QRTVs form a greater proportion of traffic, much of this vital navigational information will be lost and the risks of serious injury or death for pedestrians who are blind or vision impaired will continue to rise.

Research conducted in 2018 with people who are blind or vision impaired, by Monash University Accident Research Centre (MUARC) in conjunction with Vision Australia revealed:

* 75% of participants regularly walk, daily or almost daily. Of these participants, 42% walk outside unassisted and 58% walk outside assisted. Most of those walking outside assisted do so by using a white cane.
* 35% of participants experienced a collision or near collision with QRTVs;
* 74% of participants reported reduced confidence due to the introduction of QRTVs[[3]](#endnote-3).

For those with partial hearing loss, the issue of hybrid and electric cars being silent is particularly pertinent, and a natural consequence of an ageing population will also be increased prevalence of hearing loss in addition to vision impairment.

## Policy solutions

It is crucial that a nationally comprehensive framework includes a strict approach to the regulation of QRTVs in Australia in order to maximise the safety of pedestrians who are blind, deafblind or vision impaired. This can be achieved through adopting an international standard for the installation of an Acoustic Vehicle Alerting System (AVAS) in all QRTVs registered in Australia. This extends to all electric or hybrid cars, buses in public transport networks or any other road-using vehicle.

Australia is currently lagging behind much of the world on this issue. In 2016 the United Nations Economic Commission for Europe (UNECE) World Forum for Harmonization of Vehicle Regulations adopted UN Regulation No. 138-01. This regulation requires the installation of AVAS in all electric and hybrid vehicles, which emits a noise of 75 decibels when travelling up to and including 20 km/h.

In 2017, after advocacy from the European Blind Union and World Blind Union, Amendment No.1 to UN 138-01 was adopted, which prohibits the inclusion of a driver controlled ‘pause’ or ‘on/off switch’ for AVAS. This has been operationalised in the European Union through the adoption of ‘EU 540/2014 - Regulation of Sound Level of Motor Vehicles’, which came into effect on 1st July 2019.

Similarly, in the US, the National Highway Traffic Safety Administration (NHTSA) mandated sound emission for QTRVs travelling below 30 km/hr through the adoption of ‘Federal Motor Vehicle Safety Standard No. 141 – Minimum Sound Requirements for Hybrid and Electric Vehicles’ in 2018.

It is important that this matter is not left to the discretion of car manufacturers and is driven by government, to ensure a consistent approach to pedestrian safety across the industry.

## Recommendations

To help ensure the safety of people who are blind or vision impaired (and other pedestrians), Blind Citizens Australia recommends the Federal Government work with State and Territory governments to ensure nationally consistent rules on QRTVs. This should include the following reforms:

1. That a National QRTV Safety Strategy be developed to sit alongside the National Electric Vehicle Strategy, with a clear focus on pedestrian safety.
2. That the Strategy includes a requirement for the installation of an Acoustic Vehicle Alerting System (AVAS), without an off-switch, in all electric and hybrid vehicles registered in Australia (as per UN regulation 138-01).

1. Department of Climate Change, Energy, the Environment and Water (2023). *National Electric Vehicle Strategy*. <https://www.dcceew.gov.au/energy/transport/national-electric-vehicle-strategy> [↑](#endnote-ref-1)
2. Robert Wall Emerson. *Outdoor Wayfinding and Navigation for People Who Are Blind: Accessing the Built Environment*. <https://www.researchgate.net/publication/317235871_Outdoor_Wayfinding_and_Navigation_for_People_Who_Are_Blind_Accessing_the_Built_Environment> [↑](#endnote-ref-2)
3. MUARC & Vision Australia. *The impact of electric / hybrid vehicles and bicycles on pedestrians who are blind or have low vision*. <https://apo.org.au/sites/default/files/resource-files/2018-10/apo-nid197121_0.pdf> [↑](#endnote-ref-3)