



**BICYCLE  
NETWORK®**

**AUSTRALIAN DESIGN  
RULE DEVELOPMENT  
PROGRAM**

RESPONSE TO LANE KEEPING SYSTEMS

PROPOSAL

FEBRUARY 2022



## Introduction

### The Australian Design Rules Development Program

The *Motor Vehicle Standards Act 1989* (soon to be replaced by the *Road Vehicle Standards Act 2018*) stipulates that all new road vehicles must satisfy national vehicle standards (Australian Design Rules - ADR) before they enter the Australian market. These ADRs, developed in conjunction with international vehicle regulations, set out the mandatory requirements for safety, environmental performance and theft protection. Once new vehicles fulfill these federal requirements, responsibility is handed down to states and territories to ensure continued compliance.

The [Australian Design Rules Development Program](#) is managed by the Department of Infrastructure, Transport, Regional Development and Communications (DITRDC), and aims to amend and develop existing ADRs and introduce new ADRs where necessary.

### Lane Keeping Systems

Lane Keeping Systems (LKS) comprise two key technological interventions, largely for light vehicles, that offer the opportunity to significantly decrease collisions and road fatalities. Lane Departure Warnings (LDW) are one of the two driver aids considered a Lane Keeping System. LDW's alert drivers of a suspected unintentional drift of the vehicle outside of the lane it is driving in, this usually looks like a visual or audible demonstration to the driver. The second component of LKS are Lane Keeping Aids (LKA). These aids provide a steering intervention to shift a vehicles direction to prevent departure from its lane. LKS generally requires a camera mounted behind the windshield to identify lane markings on the road and determine the vehicle's position within the lane.

In April 2021, the European Union (EU) introduced Regulation No. 2021/646 - Emergency Lane Keep Systems, which mandates the fitting of lane keeping systems on all light

vehicles produced after July 2022. Previously, the United Nations (UN) regulation 79 on steering equipment has acted as the minimum safety standard for vehicles steering and does not mandate LKS. Australia's current design rules are aligned with UN regulation 79 but are lagging behind overseas legislation such as the EU's Emergency Lane Keep Systems regulation.

## Our position

Bicycle Network supports **Option 2** in the DITRDC's regulation impact statement, to make LKS a mandatory requirement for all new light vehicles in Australia. This change would result in a new national vehicle standard for all new light passenger and commercial vehicles up to 3.5 tonnes Gross Vehicle Mass (GVM).

We take this position for the following reasons:

- **11 per cent** of road accidents are caused by vehicles unintendedly departing their lane. These accidents, such as head-on collisions or side swiping, account for in 55 per cent of all road fatalities<sup>1</sup>. It is estimated that if Lane Keeping Systems (LKS) are a mandatory requirement for all new light vehicles, 200 lives will be saved each year<sup>2</sup>.
- Data from the [Transport Accident Commission](#) in Victoria suggests that riders are **34 times more likely** to be seriously injured than vehicle occupants, and 4.5 times more likely to be killed in a crash . Making LKS a mandatory requirement for all new light vehicles in Australia has real potential to save lives of vulnerable bike riders.
- **88 per cent** of all bike rider fatalities are caused by collisions with vehicles<sup>1</sup>, many of these collisions are likely the result of driver distraction, causing significant areas of the road space to become hazardous for others. Driving aids that alert drivers to lane departure and make steering corrections will decrease bike rider fatalities.
- At roughly 40 per cent of all bike rider fatalities, the number of collisions are **disproportionately higher on high-speed rural roads**, where there is a much higher risk of driver fatigue<sup>1</sup>. Lane Departure Warnings will prevent fatigued drivers from making avoidable mistakes that can lead to Bike rider fatalities.
- It is critical Australia follows suit with key international policy makers and does not fall behind international standards, such as the EU Regulation No. 2021/646. It is in the best interest of the Australian government to harmonise Vehicle safety safety regulations with international technological and legislative developments.
- Road trauma costs Australia's economy **\$29 billion per annum** and following a cost benefit analysis, the introduction of LKS has the estimated potential to save the nation \$3,055 million<sup>2</sup>.

## Considerations for the future

### Mandatory fitting of blind spot information systems (BSIS)

To further protect people riding bikes on roads, Bicycle Network will continue to advocate for the compulsory fitting of blind spot information systems (BSIS) for all new light vehicles.

Blind Spot Information Systems (BSIS) are a technology that alerts the driver of a vehicle of possible collisions with bikes (and motorbikes) travelling adjacent to the vehicle. The technology plays an important role for vulnerable road user safety<sup>3</sup>, as many crashes involving serious injury, and often death, occur when a vehicle making a turning movement collides with a rider travelling parallel to the vehicle<sup>4,5</sup>.

Progress has been made to amend ADRs to allow the fitting of BSIS technology in heavy vehicles. In a recent Discussion Paper, it is anticipated that a new ADR for blind spot information systems will be mandated for new heavy goods vehicles over 8 tonnes GVM and exceeding the regulated vehicle width limit<sup>6</sup>.

We believe that drivers are equally impaired when recognising riders in blind spots, regardless of vehicle type and dimensions. An ADR that mandates the fitting of BSIS will help reduce the likelihood of crashes that occur due to blind spots, and we look forward to future developments.

### Exit warning technology

One of the most serious crash risks for people riding bikes is colliding with a vehicle door as a person exits their vehicle, commonly referred to as 'dooring'. As well as causing serious injuries<sup>7</sup>, these types of crashes discourage people from using bikes, or using bike lanes that run parallel to parked vehicles<sup>8</sup>.

Technology can play a critical role. Manufacturers such as Mercedes and Ford have taken the lead by fitting 'exit warning' technology into new models<sup>9</sup>. The technology is able to alert drivers of an approaching bikes before they open their vehicle door.

This is an exciting advance in vehicle technology that could play a pivotal role in protecting vulnerable road users. The growth and evaluation of this technology may form the basis of future amendments to the Australian Design Rules development program.

### **Bicycle Network recommends**

Amend the Australian Design Rules (ADR) to make lane keeping systems (LKS) a mandatory requirement for all new light vehicles in Australia.

## Who we are

With nearly 50,000 members, [Bicycle Network](#) is one of the top five member-based bike riding organisations in the world. We are committed to improving the health and wellbeing of all Australians by making it easier for people to ride a bike.

Operating nationally, we have a measurable, successful and large-scale impact in community participation and the promotion of healthy lifestyles through bike riding.

We achieve this through:

- improving the bike riding environment by working with government at all levels to provide better infrastructure, legislation, data, policies and regulations;
- delivering successful, large-scale behaviour change programs such as Ride2School and Ride2Work;
- providing services and insurance that support bike riders through nationwide membership;
- running mass participation bike riding events such as the Great Vic Bike Ride; and
- being a key national spokesperson on issues related to cycling and physical activity.

Bicycle Network is committed to improving the safety of heavy vehicles in Australia. Our 'Swapping Seats' campaign, commissioned by Rail Projects Victoria and supported by the Metro Tunnel Project, offers free public activations for people riding bikes to increase their safety knowledge about riding with heavy vehicles.



## References

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