



AUSTRALIAN COMPETITION
& CONSUMER COMMISSION

Quad Bike Safety

Issues Paper

13 November 2017



Office of Best Practice Regulation Reference 22969

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Glossary

Term	Definition
ACCC	Australian Competition and Consumer Commission
ACL	Australian Consumer Law, Schedule 2 of the <i>Competition and Consumer Act 2010</i> .
ADRs	Australian Design Rules
ANCAP	Australasian New Car Assessment Program
ANSI	American National Standards Institute
ATVs	All-terrain vehicles (where possible referred to as quad bikes in this Issues Paper)
CARRS-Q	Centre for Accident Research and Road Safety – Queensland
CCA	<i>Competition and Consumer Act 2010</i> (Cth)
CPD	Crush protection device – a device mounted to quad bike to minimise the risk of the rider being crushed by vehicle if it rolls over. Does not enclose the rider, but instead holds the upturned vehicle off the ground, creating a ‘crawl out’ space for the rider in the event of the vehicle rolling over
DIRD	Department of Infrastructure and Regional Development
DPIPWE	WorkSafe Tasmania and the Department of Primary Industries, Parks, Water and the Environment
FCAI	Federal Chamber of Automotive Industries
IDC	Inter-Departmental Committee for Quad Bike Safety
Model WHS Act	Model Work Health and Safety Act
Model WHS Regulations	Model Work Health and Safety Regulations
MVSA Act	<i>Motor Vehicle Standards Act 1989</i> (Cth)
OBPR	Office of Best Practice Regulation
OHS Act	<i>Occupational Safety and Health Act 1984</i> (Vic)
OHS Regulations	<i>Occupational Health and Safety Regulations 2017</i> (Vic)
OPDs	Operator protector devices, includes both CPDs and ROPSSs
RIS	Regulation impact statement
ROPS	Rollover protection structure – a protective structure that encloses the rider and should be used in conjunction with seatbelts. Most commonly used on SSVs
SSVs	Side-by-side vehicles (also known as ‘utility task vehicles’ (UTVs))
TARS Project	UNSW TARS Quad Bike Performance Project
TRG	Technical Review Group established by the IDC
Type I ATVs	ATVs intended by the manufacturer for use by a single operator and no passenger
Type II ATVs	ATVs intended by the manufacturer for use by an operator and a passenger, and that are equipped with a designated seating position behind the operator

Term	Definition
UNSW TARS	University of New South Wales Transport and Road Safety Research Unit
US Standard	ANSI/SVIA-1-2010 for Four-Wheel All-Terrain Vehicles Equipment Configuration, and Performance Requirements
WA OSH Act	<i>Occupational Safety and Health Act 1984 (WA)</i>
WA OSH Regulations	<i>Occupational Safety and Health Regulations 1996 (WA)</i>
VISU	Victorian Injury Surveillance Unit

Questions for response

- 1) Can you provide additional data or information on costings of injuries and fatalities caused by quad bikes?
- 2) Would design changes to quad bikes be likely to reduce the number of injuries and fatalities caused by quad bikes in Australia?
- 3) If you answered 'yes' to question 2, what design changes do you consider would have this effect? Which design features, if any, should a safety standard mandate or prohibit? In particular the ACCC is interested in understanding design changes that are likely to reduce:
 - a) injuries and fatalities caused as a result of quad bike rollover
 - b) injuries and fatalities caused to children
 - c) injuries and fatalities caused to riders being carried on quad bikes not designed to carry passengers.
- 4) If your view is that design features should be mandated or prohibited to increase quad bike safety, could the regulation be designed to encourage innovation rather than prescribing particular products or technical solutions (for example by ensuring fitting points or attachment mechanisms to allow the development of improved CPDs or ROPSs or by prescribing performance-based outcomes rather than technical designs)?
- 5) If any or all of these design changes were implemented in Australia, are you able to estimate the additional cost that would be imposed on Australian suppliers?
- 6) To what extent does the US Standard satisfactorily address design features that ensure quad bikes are safe for use? Do you consider that Australia should adopt a mandatory safety standard similar to the US Standard? To what extent would this option impose additional costs on Australian suppliers or create barriers to trade?
- 7) Are consumers currently getting adequate information at the purchase point about quad bike use and limitations or safety information and equipment? Should there be additional warnings or instructions displayed at the point of purchase or provided with the sale of quad bikes?
 - a) What form should the warnings or instructions take?
 - b) What costs would be imposed by the requirement for further warnings or instructions?
 - c) What benefits might the warnings or instructions have in reducing quad bike related deaths and injuries?
- 8) In relation to the option of a consumer safety rating system:
 - a) what testing criteria should be specified?
 - b) how should test results be displayed?
 - c) what costs might be imposed by requiring the testing of vehicles and displaying the test results?
 - d) what benefits might a consumer safety rating system have in reducing quad bike related deaths and injuries?
- 9) If your view is that regulation is needed to reduce the number of injuries and fatalities caused by quad bikes in Australia, how should these be implemented? One proposed option is to prohibit or mandate particular design features; another is to increase consumer information, including through a consumer safety rating system; a third option is a combination of both:

- a) What are the comparative benefits and costs of these approaches?
- 10) If the ACCC recommends a mandatory safety standard for quad bikes:
- a) should the standard apply differently to quad bikes used for different purposes, for example agriculture, sports, recreation, tourism and commercial hire?
 - b) should the standard apply differently to quad bikes designed for use by children?
 - c) should the standard apply to SSVs as well as quad bikes, and if so how should the vehicles be defined?
 - d) when should the standard commence?
 - e) should the standard include a transitional provision?
 - f) should the standard have an expiry date?
 - g) should the standard apply to both new and second hand vehicles, or be limited to new quad bikes sold after the transitional date?
- 11) What is the life cycle of quad bikes in Australia? For example, on average how long do consumers use quad bikes before the vehicle is retired? How long might it take before the current stock of 380,000 quad bikes is replaced by new stock that satisfies requirements of a safety standard, if imposed?
- 12) Please provide any other information you consider may be relevant to the ACCC's consideration of these issues.

1. Introduction

Quad bikes (also known as all-terrain vehicles (ATVs)) have been responsible for 114 deaths in Australia from 2011 to October 2017. Seventeen of these deaths were children under the age of 16. Deaths and injuries cause significant harm and disruption to Australian families and communities, and injuries caused by quad bikes can be disabilities that last a lifetime.

The Australian Competition and Consumer Commission (ACCC) has commenced a safety investigation into quad bikes for the purposes of determining whether to recommend to the Commonwealth Minister for Small Business, the Hon. Michael McCormack MP, that he make a safety standard for quad bikes under the Australian Consumer Law (ACL). A safety standard for quad bikes could:

- require quad bikes to be tested in accordance with a national quad bike safety rating system
- prohibit unsafe design features or mandate requirements for design and construction, and/or
- prescribe the form and content of any warnings or instructions that need to accompany quad bikes at the point of sale, including the safety rating achieved by the quad bike.

This Issues Paper aims to explain:

- the current regulatory environment
- industry and government initiatives
- international approaches to quad bike regulation
- the costs associated with quad bike deaths and injuries.

It also lists policy options available to the ACCC under the ACL that could increase quad bike safety. The issues paper seeks views on the merits and costings of the proposed policy options.

The submissions in response to this Issues Paper will inform the ACCC's:

- Draft Recommendation, released in the first quarter of 2018 for public consultation
- Final Recommendation, which will be provided to the Minister for Small Business by mid-2018.

2. Have your say

The ACCC invites interested parties to provide information and comment on this Issues Paper.

Submissions must be provided on or before **Friday 15 December 2017**.

Submissions can be lodged

Online	ACCC consultation hub at consultation.accc.gov.au/
By email or post:	Director Quad Bikes Taskforce Consumer Product Safety Branch Australian Competition and Consumer Commission GPO Box 3131 CANBERRA ACT 2601 qbtaskforce@acc.gov.au

Contacts

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Website:	productsafety.gov.au/

All submissions will be treated as public documents and published on the ACCC website, productsafety.gov.au, unless otherwise requested. Parties wishing to submit confidential information are requested to:

- clearly identify the information that is the subject of the confidentiality claim – the identified information must be genuinely of a confidential nature and not otherwise publicly available, and
- provide a non-confidential version of the submission in a form suitable for publication – this public version should identify where confidential information has been redacted.

The ACCC will not disclose the confidential information to third parties, other than advisors or consultants engaged directly by the ACCC, except where permitted or required by law. See the [ACCC & AER information policy: collection and disclosure of information](#) publication for more information. For further information, see the ACCC's Information Policy (June 2014) at acc.gov.au/publications/acc-aer-information-policy-collection-and-disclosure-of-information.

3. Background

3.1 Quad bikes

The common design characteristics of quad bikes are that they are operated (or ridden) by a rider straddling a seat, with their feet on footrests and holding handle bars, in a manner similar to a motorcycle. Unlike motorbikes, quad bikes have a push/release lever throttle control. Quad bikes are fitted with either three or four large wheels with low-pressure tyres.

Quad bikes are intended for off-road use on non-paved surfaces. Quad bikes have a high vertical centre of gravity, and hence a propensity to roll or flip. Quad bikes can be categorised as designed for:

- recreation and sports: typically lightweight vehicles with a lower centre of gravity resulting in quick acceleration
- utility: typically the heaviest vehicles, with high towing and lifting capabilities
- youth: specifically designed for young riders (age 6 and above). These vehicles are typically light, small and less expensive versions designed for recreational riding.

Quad bike designs also vary according to the number of people they are designed to hold. Some quad bikes are intended by the manufacturer for use by a single operator and no passenger.¹ Other quad bikes are intended by the manufacturer for use by an operator and a passenger, and are equipped with a designated seating position behind the operator.²

Side-by-side vehicles (SSVs), also called 'utility task vehicles' (UTVs), are similar to quad bikes but have a 'sit in' side-by-side seating arrangement so that the vehicle can be used by the operator and passengers. SSVs typically have steering wheels, seatbelts and rollover protection structures that enclose the driver. SSVs also have a higher load capability and are longer and wider than quad bikes. The load in SSVs is commonly carried below the top of the tyres, which contributes to a lower vertical centre of gravity.

3.2 Quad bike market

Retail market

The global quad bike market was valued at almost USD\$6 billion (AUD\$7.8 billion) in 2015 and is expected to grow to USD\$8.8 billion (AUD\$11.3 billion) by 2024.³ The Australian market makes up around three percent of the global market, and in 2015 was valued at USD\$180.8 million (AUD\$231.4 million), expected to grow to USD\$312.6 million (AUD\$400.1 million) by 2024.⁴ While the Australian market represents a relatively small share of the global market, it is growing at a higher rate than the global market.⁵ Sales of quad bikes for use in agriculture are expected to grow faster than for any other segment of the Australian market.⁶

¹ These quad bikes are classified as Type I ATVs in the US, see ANSI/SVIA 1-2017, approved by the American National Standard Institute 8 June 2017.

² These quad bikes are classified as Type II ATVs in the US, see ANSI/SVIA 1-2017, approved by the American National Standard Institute 8 June 2017 or atvsafety.com.au/what-atv (accessed 12 October 2017).

³ Global Market Insights, *ATV Market Report* (2017) p 20.

⁴ Using an exchange rate of 1 US Dollar equals 1.28 Australian Dollar. Global Market Insights, *ATV Market Report* (2017) p 87.

⁵ The global growth rate for 2016 to 2024 is estimated to be 5% compared to the Australian growth rate of 6.3%: Global Market Insights, *ATV Market Report* (2017) p 87.

⁶ Global Market Insights, *ATV Market Report* (2017) p 88.

In Australia, a total of 22,834 quad bikes were sold in 2016.⁷ The number of quad bikes in operation in Australia is estimated to be around 380,000.⁸ In 2015, the Australian quad bike market by application was:⁹

- Sports: AUD\$71.9 million or 29.4%
- Entertainment: AUD\$58.4 million or 23.9%
- Agriculture: AUD\$35.3 million or 14.4%
- Military & defence: AUD\$18 million or 7.4%
- Forestry: AUD\$14.2 million or 5.8%
- Others: AUD\$46.6 million or 19.1%
- Total: AUD\$244.4 million.

Quad bikes are heavily utilised in Australian forestry and agricultural industries. In 2015 forestry and agriculture accounted for a total of 20.2 percent of all quad bike sales in Australia. Farmers rely on quad bikes for weed spraying, mustering and to check stock and fences. For many farmers, quad bikes are affordable and indispensable equipment that are used almost every day.

Quad bikes are also becoming increasingly popular in recreational and sporting settings and are used as a means to experience the outdoors, for hobby riding and for racing. In 2015 recreation and sport accounted for a total of 53.3% of all quad bike sales in Australia.¹⁰

Globally, the recreation sector is anticipated to be one of the leading market growth sectors, as quad bikes are increasingly rented for activities such as off-roading, eco-tourism, safari operations and adventures. The increasing popularity of quad bikes among families, including children, is expected to further propel market growth.

Supply chain

The supply chain for new quad bikes includes manufacturers, importers, distributors and end-users. New quad bike sales also have flow-on effects, creating demand for: aftermarket services (vehicle servicing, replacement parts and repairs including crash repairs); the addition of accessories (such as operator protective devices, trailers, gun boots and spray tanks); and the second-hand vehicle market.

The main suppliers in Australia are Polaris, Honda, Yamaha, BRP (Can-Am brand), Suzuki and Kawasaki.¹¹ In 2015, the global company market share was:¹²

- Polaris 32%
- Honda 21%
- Yamaha 15%
- Arctic Cat 9%
- Can-Am 8%
- Others 15%

⁷ fcai.com.au/sales (accessed 12 October 2017).

⁸ Centre for Accident Research and Road Safety (Queensland University of Technology cited by WorkCover Queensland worksafe.qld.gov.au/__data/assets/pdf_file/0006/114675/statewide-plan-for-improving-quad-bike-safety-in-queensland-2016-2019.pdf (accessed 12 October 2017).

⁹ Global Market Insights, *ATV Market Report* (2017) p 88.

¹⁰ Global Market Insights, *ATV Market Report* (2017) p 88.

¹¹ fcai.com.au/library/publication/fcai_motorcycle_market_ytd_sept_comparison_summary.pdf (accessed 12 October 2017).

¹² Global Market Insights, *ATV Market Report* (2017) p 36.

Distribution may be through bricks-and-mortar stores or online.

Customers typically purchase new quad bikes from distributors and dealers, although manufacturers may supply customers directly for special purpose applications such as defence. A feature of the industry is the vertically connected 'manufacturer authorised' supply chains organised around manufacturer brands. Businesses in these supply chains are vertically connected through commercial mechanisms such as manufacturer ownership of quad bike distributors and authorised dealer agreements.

New and second-hand quad bikes are also sold online. Some online sales are direct between suppliers and purchasers, while others are through online marketplaces that provide a platform to connect purchasers and sellers such as eBay, Bikesales or Gumtree. Currently the ACCC does not have data on the percentage of sales made online or the size of the second-hand market.

4. Deaths and injuries

4.1. Deaths in Australia

From 1 January 2011 to 16 October 2017, 114 deaths were associated with quad bikes. Ten of these fatalities occurred in this calendar year.¹³ This is an average of 16-17 deaths per year. Deaths have occurred in each state and territory, with the majority in Queensland (31%), NSW (26%) and Victoria (22%) (Table 1).

Table 1: Quad bike deaths by state and territory: 1 Jan 2011 to 16 Oct 2017

State	Number	Percentage of total
QLD	35	31
NSW	30	26
VIC	25	22
TAS	9	8
WA	8	7
SA	4	4
NT	2	2
ACT	1	<1
Total	114	100

As shown in Table 2, the majority of deaths were male (83%), and children accounted for 15% of deaths.

¹³ safeworkaustralia.gov.au/quad-bike-fatality-data#2001 (accessed 12 October 2017).

Table 2: Quad bike deaths by age and gender: 1 Jan 2011 to 16 Oct 2017

Demographics	Number	Percentage of total
Adult male	82	72
Adult female	15	13
Child male	12	11
Child female	5	4
Total	114	100

Approximately half of the deaths occurred in the context of employment or work (47%), with the other half (50%) occurring during sport or recreational activities. There are a small number of deaths where the context is unknown (Table 3).

The 54 workers who died were almost exclusively employed in agriculture or rural based businesses and mostly occurred on a rural property.¹⁴ Similarly, many of the non-working deaths also occurred on rural properties. Other locations included public roads and beaches.

Table 3: Quad bike deaths by occupation: 1 Jan 2011 to 16 October 2017

Working or non-working	Number	Percentage of total
Working	54	47
Non-working	57	50
Working (bystander)	1	<1
Unknown	2	<2
Total	114	100

4.2. Injuries in Australia

There is no central repository of injury data in Australia, and so the ACCC has obtained data from a range of sources available to it. The data is incomplete and spans various time periods. Data has been obtained from:

- Queensland Injury Surveillance Unit
- Victorian Injury Surveillance Unit, Monash University
- Epidemiology Branch, Department of Health, Western Australia
- University of New South Wales Transport and Road Safety Research Unit (UNSW TARS).

Australia-wide, the Centre for Accident Research & Road Safety – Queensland (CARRS-Q) reported that from 2003-2011 almost 8000 patients were admitted to hospital for quad bike related injuries. The average length of stay for children was 2.5 days, and the average length

¹⁴ Australian Centre for Agricultural Health and Safety, Mid-Year Report 2015, available at http://sydney.edu.au/medicine/aghealth/uploaded/fs_docs/farm_related_injuries_mid_year_report_2015.pdf

of stay for adults was 3.4 days. Fifteen percent of child admissions and 25% of adult admissions were classified as 'serious'.¹⁵

Of the recreational injuries that occurred in 1999-2013, the most common place of injury was a farm (46% of children and 40% of adult injuries). Locations for remaining injuries included public roads, sports/recreational facilities and the beach.

From 2009-2013 there were 2971 presentations (an average of 594 per year) at emergency departments in Queensland alone, due to recreational quad bike use.

In NSW, data from 2006-2012 indicated that there were 3307 emergency department presentations (an average of 472 per year) for quad bikes and SSVs.¹⁶

Injury data from Western Australia shows that there were 2215 hospitalisations (an average of 369 per year) due to quad bikes from 2011 to 2016. This represents a crude rate of 14.64 hospitalisations per 100 000 population. Of all hospitalisations due to quad bikes, children under the age of 15 represented 13.5% of hospitalisations, and males of all ages accounted for almost 74% of hospitalisations.

The Victorian Injury Surveillance Unit (VISU) at Monash University reported 1106 emergency department presentations (an average of 221 per year) and 437 hospital admissions relating to quad bike injuries in Victoria from 1 July 2011 to 31 June 2016. Seventeen percent of admissions were children under the age of 15, and males accounted for almost 75% of admissions. The most common injuries in hospital admissions were head injuries (20%), followed by shoulder and arm injuries (17%), and thoracic injuries (12%).

VISU data indicates that almost 90% of patients admitted to hospital were discharged within seven days, with 51% being discharged within two days. In 34% of cases, injuries were classified as 'serious'.

The Royal Children's Hospital reports that in the past ten years, it has seen serious trauma cases from children's quad bike accidents grow by about 25% each year.¹⁷ It reports the injuries to children are severe: intracranial head and brain; skull and face fractures; chest, abdomen and spinal injuries.¹⁸

4.3. Causes of death and injury

Deaths in Australia

More than half (55%) of all deaths associated with quad bikes were the result of a rollover (the overturning of the vehicle) and 30% were from collision. About 90% of rollover deaths occur on farms.¹⁹

¹⁵ The Centre for Accident Research & Road Safety-Queensland, a joint initiative of Queensland University of Technology and the Motor Accident Insurance Commission, *Recreational Quad Bike-related Injuries in Queensland: Patterns and Contributory Factors* Report 1 submitted to the ACCC May 2015, Report 2 submitted to the ACCC June 2015 and an updated report submitted to the ACCC October 2017.

¹⁶ Grzebieta R, Rechnitzer G, Simmons K and McIntosh AS, University of New South Wales Transport and Road Safety Research Unit, *Final Summary Project Report: Test Results, Conclusions, and Recommendations* (Quad Bike Performance Project, TARS Research Report No 4, 2015) provided to WorkCover Authority of New South Wales p 28.

¹⁷ blogs.rch.org.au/news/2013/05/21/rch-lobbies-for-ban-on-quad-bikes/ (accessed 27 October 2017).

¹⁸ blogs.rch.org.au/news/2013/05/21/rch-lobbies-for-ban-on-quad-bikes/ (accessed 27 October 2017).

¹⁹ The Hon Bill Shorten MP, *Review of Design and Engineering Controls for Improving Quad Bike Safety* (Public discussion paper, 2012) submissions.swa.gov.au/swaforms/archive/quad-bike/pages/index.

Table 4: Quad bike deaths: Type of incident: 1 Jan 2011 to 16 October 2017

Cause of accident	Number	Percentage of total
Rollover	62	55
Collision	34	30
Other	13	11
Unknown	5	4
Total	114	100

Rollovers include where the quad bike rolls sideways or where the quad bike flips vertically. Rollovers typically occurred when operators attempted to ride up or down an incline, ride across a slope, navigate tight corners or hit hidden objects or rough terrain. In these scenarios, the weight of the vehicle, coupled with a changing centre of gravity, caused the vehicle to roll or flip over, often trapping the rider underneath.²⁰ The main cause of death associated with rollovers was asphyxiation or crush injuries, where the operator is trapped underneath the overturned vehicle, which commonly weighs hundreds of kilograms.²¹ Of the on-farm deaths involving quad bikes since 2012, 27% were caused by asphyxia or crush injuries. The CARRS-Q report found that rollovers accounted for 72% of child deaths from recreational quad bike use. Other injuries, such as traumatic head injuries, were also associated with rollover deaths.

Deaths associated with collisions included collisions with fences, stationary objects and one report of a collision with a motorcyclist.²² The category of 'other' types of incidents included being thrown from the vehicle and losing control of the vehicle. In collisions or when the rider was thrown from the vehicle, the most common cause of death was traumatic head injuries.²³

The presence of passengers and other destabilising factors, such as attached spray tanks or towed objects, were a contributing factor in many deaths. Carrying passengers changes the centre of gravity of the vehicle, restricts the ability to actively ride (where the rider adjusts their position on the quad bike to lower the centre of gravity) and acts as a destabilising force, making rollover and loss of control more likely when navigating uneven terrain or inclines. Research on consumer choices commissioned by the ACCC indicates that over 20% of recreational quad bike riders usually ride a quad bike with another person on the vehicle.²⁴

²⁰ safeworkaustralia.gov.au/quad-bike-fatality-data#2001 (accessed 12 October 2017).

²¹ *Inquest into the deaths of Donald Eveleigh, Angela Stackman, FW, ML, Anthony Waldron, Colin Reid, Bradley Jackson, Robert Beamish and LE.* Findings of Deputy State Coroner Sharon Freund, delivered on 26 November 2015 at State Coroner's court, Glebe.

Inquest into nine deaths caused by Quad Bike accidents. Findings of Deputy State Coroner John Lock, delivered on 3 August 2015 at State Coroner's Court, Brisbane.

Inquest into the deaths of Heather Dawn Richardson, Jan Severin Jensen, Kendall Russell Bonney, Vicki Mavis Percy, Jay Randall Forsyth, Jacob Graham Green and Roger Maxwell Lerner. Findings of Coroner Simon Cooper, delivered on 25 August 2017 at State Coroner's Court, Hobart.

²² safeworkaustralia.gov.au/quad-bike-fatality-data#2001 (accessed 12 October 2017).

²³ safeworkaustralia.gov.au/quad-bike-fatality-data#2001 (accessed 12 October 2017).

²⁴ Colmar Brunton, *Recreational Quad Bike Usage*, submitted to ACCC 26 March 2013, p 15., available at: productsafety.gov.au/system/files/Quad%20bikes%20-%20Consumer%20research%20report%20-%20March%202013.pdf.

Of the deaths involving children, 50% involved the child being on the wrong sized quad bike²⁵ and 33% involved passengers being carried on the vehicle (Table 5).

Table 5: Quad bike deaths involving children: 1 Jan 2011 to 16 October 2017

Possible contributing factor	Number	Percentage of total
Wrong size quad bike	9	50
Passengers involved	6	33
Container being towed	1	6
Unknown	2	11
Total	18²⁶	100

Injuries in Australia

It is more difficult to identify the cause for each specific reported quad bike injury. In respect of emergency department presentations from quad bike injuries in Victoria from 1 July 2011 to 31 June 2016, approximately 13% were attributed to rollover and another 13% attributed to collisions. Causes of injury were reported to be unknown in 61% of cases.

The CARRS-Q report found that injuries associated with falls from recreational quad bikes accounted for 45% of emergency department quad bike presentations in children and 41% of emergency department quad bike presentations in adults. Rollovers accounted for 15% and 23% of emergency department quad bike injury presentations respectively.

5. Consumer complaints

The ACCC and state and territory fair trading and consumer affairs agencies are responsible for enforcing the ACL. For the period from 1 January 2011 – 1 October 2017, the ACCC received 65 complaints regarding quad bikes, while New South Wales Fair Trading received 107 and Consumer Affairs Victoria received 190. Approximately 70% of these complaints combined were regarding consumer guarantees (faulty quad bikes or services not carried out with due care or skill) and approximately 7% relating to other ACL issues such as false and misleading representations regarding the price, performance characteristics and uses.

There were also several complaints (approximately 8%) regarding safety issues. Below are some examples:

- A consumer purchased a children’s quad bike from an online marketplace and collected the vehicle from a physical store. Upon bringing the quad bike home, the consumer reported they noticed several defects in the steering wheel, the fuel filter and the bumper bar. When the consumer’s child was using the quad bike, the steering wheel locked and the wheels shook. The child fell from the vehicle.
- A consumer purchased a no-name brand quad bike for \$420 at a shopping centre. The consumer was concerned that the quad bike was unsafe because the

²⁵ Eight of these deaths involved a child on an adult-sized quad bike and one death involved a four year old on a quad bike designed for use by children aged 10+.

²⁶ 17 deaths involving children occurred through this time-period, however one death involved both a child being on the wrong sized bike and the carrying of passengers, so was counted towards both potential contribution factors.

carburettor became defective and had to be replaced and a wheel came off because the metal holding the lock nut had bent.

- A consumer purchased a quad bike for agricultural use which they reported malfunctioned after the first use. The consumer reported that the exhaust pipe, located just below the fuel tank, glowed and burned red. The consumer was worried that the quad bike was a significant fire hazard.
- A consumer purchased a children's quad bike from a catalogue. The consumer reported that the bike required the child's thigh to rest against the motor, which after a short amount of activity became hot. The consumer was concerned the vehicle model was unsafe.
- A consumer purchased three quad bikes from an online supplier. The consumer reported all three quad bikes to have severe defects including: battery issues, rear-light failure, a faulty starter motor and faulty wiring. The consumer alleged that one of the vehicles caught on fire, and two others had electrical issues.

6. Coronial inquests

State and territory coroners have jurisdiction to investigate sudden and unexpected deaths, including quad bike deaths. In the past two years, three major inquests into deaths arising from quad bike or SSV use have been held in Australia. These were:

- 2015 Deputy Coroner Freund's inquest into nine quad bike related deaths in New South Wales
- 2015 Deputy Coroner Lock's inquest into nine quad bike related deaths in Queensland
- 2017 Coroner Cooper's inquest into seven quad bike deaths in Tasmania.

There has also been an earlier inquest in New Zealand:

- 2013 Coroner Shortland's inquest into five quad bike related deaths in New Zealand.

Common recommendations from all inquests include:

- introducing legislation to require mandatory licencing. Queensland and New Zealand also recommended consideration be given to mandating training through certification or licencing
- endorsing the use of helmets at all times when a quad bike is in use.

The Australian coroners' findings all included recommendations for:

- the implementation of a safety rating system, with the Queensland coroner recommending the UNSW TARS Quad Bike Performance Program be used as a starting point
- the introduction of legislation making training packages mandatory. The Queensland coroner recommended the training be subsidised. The New Zealand coroner strongly endorsed training, but did not go so far as suggesting legislating training requirements. The New Zealand Coroner also recommended better information be given to the public on correct tyre pressures and general vehicle maintenance, which could be incorporated in training and education programs
- a standard for quad bike be developed with Standards Australia. The Queensland and Tasmanian coroners recommend the standard be initially based on the US Standard

- introducing legislation to prohibit any child under the age of 16 from operating an adult sized quad bike. The Queensland coroner recommended prohibiting children under the age of 7 from being passengers on adult quad bikes (which has since been adopted). The Tasmanian coroner recommended children under the age of 6 be banned from operating any quad bike.

The New South Wales and Queensland coroners both recommended:

- the development of an Australian standard specifically for quad bike helmets
- implementing a public media campaign and awareness campaign for children's safety.

The Queensland and Tasmanian coroners both recommended:

- standardising approaches across Australia for investigating quad bike deaths
- introducing legislation to prohibit the carrying of passengers on single-rider quad bikes and limiting the number of passengers to the vehicle's design intentions.

Additionally:

- the New Zealand coroner recommended regular testing of after-market attachments and products, specifically trailers and spray units, to better understand the limitations and risks of quad bike stability
- the New South Wales coroner recommended the introduction of an Australian Standard specifically for SSVs which should include a requirement for seatbelts and recommended legislation should follow requiring seat belts to be used when operating SSVs
- the Queensland coroner recommended that an Australian Standard should be developed for Operator Protection Devices (OPDs) used in the workplace. The New Zealand coroner recommended closely following the Australian developments on Roll Over Protection Structure (ROPS)
- the New South Wales, Queensland and New Zealand coroners recommended conducting an independent study to assess the benefits, risks and efficacy of OPDs or ROPS. These three coroners also recommended considering warning signals that activate on slopes when a quad bike is potentially at a tipping point or reversing, or personal locator beacons that activate should a quad bike roll over.

A summary of the coronial recommendations is at Attachment A to this Issues Paper.

7. Australia's current legislative framework

7.1. Work health and safety legislation

Obligations under model work health and safety laws

State and territory governments are responsible for the regulation of workplace health and safety (WHS) in their jurisdiction. In 2011 Safe Work Australia developed a single set of WHS laws to be implemented across Australia. These are known as 'model' laws. For the model WHS laws to become legally binding, the Commonwealth, states and territories must separately implement them as their own laws. The Commonwealth and all states and territories, except Victoria and Western Australia, have implemented the model WHS laws.

The model Work Health and Safety Act (WHS Act) imposes a primary duty of care on persons conducting a business or undertaking (PCBU). A PCBU must manage risks arising

from the business or undertaking including risks associated with the use of plant²⁷ which includes quad bikes. This means a PCBU must provide and maintain quad bikes that are without risk to health and safety, so far as is reasonably practicable, and ensure the safe use, handling and storage of quad bikes. The primary duty of care also requires a PCBU to provide any necessary information, training or instruction about the use of quad bikes.

Where quad bikes could reasonably be expected to be used at a workplace, the model WHS laws impose additional requirements on persons who manage or control design, manufacture, import or supply of plant including quad bikes. These persons must ensure, so far as is reasonably practicable, that the quad bikes are without risk to health and safety. Designers, manufacturers, importers and suppliers must carry out any necessary testing, or ensure that it is carried out, and provide information on the purpose of the quad bike, the results of any testing and any use conditions.

The model WHS Regulations (WHS Regulations) also require persons who manage or control, design, manufacture, import or supply powered mobile plant such as quad bikes, to:

- manage the risks of the vehicle overturning
- ensure, as far as reasonably practicable, that suitable operator protective devices are provided, maintained and used
- ensure that the vehicle has a warning device that warns those at risk of collision.

Victoria

The safety aspects of design, manufacture, supply (including import), and use of quad bikes are regulated in Victoria regardless of where the bikes are used. Quad bikes used in Victorian workplaces are regulated by the *Occupational Health and Safety Act 2004* (the OHS Act) and the *Occupational Health and Safety Regulations 2017* (OHS Regulations). Quad bikes used elsewhere may be regulated under the *Equipment (Public Safety) Act 1994* and the *Equipment (Public Safety) Regulations 2017*.

Victorian duty holders²⁸ are subject to requirements that largely mirror the duties described above under the WHS Act and WHS Regulations. The main difference is that the relevant duty holders at a workplace are employers and self-employed persons, rather than a person conducting a business or undertaking that manages or controls plant at a workplace. In addition, the OHS Regulations require quad bikes to be design registered before they can be used at a workplace.

Under the OHS Act, an employer must, where reasonably practicable, provide and maintain for employees of the employer a working environment that is safe and without risks to health. Victoria considers suitably designed and tested rollover protection devices on quad bikes are a means of reducing the risk to operators in the event of a rollover. It is also expected that further measures including the use of helmets, training for operators, age restrictions for adult quad bikes and not carrying passengers are applied in workplaces.

Western Australia

Although the model WHS laws have not been adopted, Western Australia's workplace safety laws in relation to quad bikes are similar to the model WHS laws. Under the *Occupational Safety and Health Act 1984* (WA OSH Act), quad bikes fall within the definition of plant. The WA OSH Act places duties on employers to, so far as is practicable, provide and maintain a working environment in which employees are not exposed to hazards. These duties include

²⁷ Under the model WHS laws 'plant' includes any machinery, equipment, appliance, container, implement and tool, and includes any component or anything fitted or connected to those things. Plant can be as diverse as lifts, cranes, computers, machinery, scaffolding components, conveyors, forklifts, vehicles, power tools and amusement devices.

²⁸ 'Duty holder' refers to any person who owes a work health and safety duty under the WHS Act including an employer (Victoria/Western Australia) a PCBU, designer, manufacturer, importer, supplier, installer of products or plant used at work (upstream duty holders), an Officer and workers. Further information about who has what duty under WHS laws can be found on each WHS regulator's website.

employers, providing and maintaining workplaces, plant and systems of work such that, so far as practicable, employees are not exposed to hazards. Employers are also required to provide such information, instruction, and training to, and supervision of, as is necessary to enable the employees to perform their work in such a manner that they are not exposed to hazards.

The *Occupational Safety and Health Regulations 1996* (WA OSH Regulations) require employers and similar duty holders, designers, manufacturers, importers and suppliers, to identify workplace hazards, including those relating to quad bikes, to which a person is likely to be exposed, assess the risks of injury or harm resulting from the hazard and consider the means by which the risk may be reduced.

As a quad bike falls within the definition of plant, the WA OSH Regulations also prescribe requirements for duty holders to ensure a competent person undertakes commissioning and appropriate inspection of the quad bikes and damaged quad bikes. Quad bikes used for work are also not to be used in a manner which could render the plant a hazard to any person at a workplace.

7.2. Vehicle design rules

The Department of Infrastructure and Regional Development (DIRD) regulates the manufacture, importation and first supply to the market of road vehicles. Motor vehicles in Australia are regulated under the *Motor Vehicle Standards Act 1989* (Cth) (the MVSA Act) and *Motor Vehicle Standards Regulations 1989* (Cth). The MVSA Act includes Australian Design Rules (ADRs) which apply to all road vehicles whether they are newly manufactured in Australia or are imported as new or second hand vehicles. The ADRs are national standards for vehicle safety, anti-theft and emissions.

Quad bikes are not determined to be road vehicles as defined under the MVSA Act and are therefore not covered under the current ADRs.²⁹

7.3. Transport rules

There are no uniform requirements for the registration or use of quad bikes in Australia under existing road transport rules. In summary:

- all states and territories permit quad bikes to be used on public roads subject to certain conditions
- all states and territories, other than the Australian Capital Territory when used directly across the road ('gate to gate') and South Australia, require the quad bike to be registered for use on public roads
- New South Wales, Tasmania, the Northern Territory, Victoria and Western Australia require the rider to be licensed to ride a quad bike on a public road
- only New South Wales, Northern Territory and Tasmania have a minimum age of 16 for a quad bike rider on a public road, Victoria requires a minimum age of 18
- in relation to passengers on public roads: in Victoria, passengers cannot be carried; in Tasmania, in relation to recreational use registration, passengers cannot be carried; and in Queensland, passengers must be eight years or over³⁰

²⁹ DIRD commenced a review in 2013 of the *Motor Vehicle Standards Act 1989*. In 2016, DIRD decided not to expand the scope of the Act to include quad bikes. A revised legislative instrument was published in 2017 with quad bikes listed under vehicles that are not road vehicles for the purposes of the Act. See *Motor Vehicle Standards (Road Vehicles) Determination 2017* www.legislation.gov.au/Details/F2017L01175.

³⁰ And children of any age if they cannot sit with their feet flat on the floor and hands on handlebars.

- Victoria, New South Wales, Northern Territory, Tasmania and Western Australia have speed limits for quad bikes on public roads
- New South Wales, Victoria, Northern Territory and Tasmania require lighting to be fitted to quad bikes
- New South Wales (if the vehicle does not have headlights, taillights and number plate lights), Northern Territory, Tasmania and Western Australia restrict use to daylight only
- New South Wales, Northern Territory and Victoria require certain fittings to be attached to quad bikes, such as a mirror, horn or an elevated warning lamp
- Victoria requires quad bikes to travel on the un-formed roadside of roads (unless specific circumstances apply) and does not permit towing on public roads
- Northern Territory, Victoria, Queensland, Tasmania and Western Australia require quad bike riders to wear a helmet on a public road (in Queensland, this also applies to passengers – although there is an exemption if the vehicle has factory fitted seatbelts and ROPS).

Attachment B compares the different rules across states and territories and contains a more detailed overview of state and territory transport initiatives.

7.4. Voluntary Australian standards and codes of practice

Standards Australia is a not-for-profit standards organisation that develops voluntary Australian standards through the formation of expert technical committees. Currently there is no voluntary Australian standard for quad bikes or SSVs. Any person or organisation can submit a project proposal to Standards Australia to seek the development or amendment of a standard.³¹

The FCAI is an industry organisation representing manufacturers and importers of passenger vehicles, light commercial vehicles and motorcycles (including quad bikes and SSVs) in Australia. FCAI members and other manufacturers have voluntarily adopted the American National Standards Institute (ANSI/SVIA) standard for quad bikes discussed in section 11 of this Issues Paper.³²

7.5. Australian Consumer Law

The Australian consumer product safety framework is underpinned by the Australian Consumer Law (ACL). The ACL is set out in Schedule 2 to the *Competition and Consumer Act 2010* (CCA). The ACL is applied as a law of the Commonwealth (CCA Part XI) and as a law of the states and territories (through the enactment of legislation in each state or territory that applies the ACL as a law of its jurisdiction).

Under the ACL, suppliers are responsible for selling consumer goods that are safe and fit for purpose. The ACL provides consumers with specific protections for consumer transactions called consumer guarantees that apply each time they purchase goods or services. One of those guarantees is that goods will be of acceptable quality, defined in the ACL as being safe, fit for purpose and free from defects.

In addition, under specific provisions of the ACL, Commonwealth, state and territory ministers can regulate consumer goods and product-related services by:

- issuing safety warning notices
- banning products on an interim basis

³¹ standards.org.au/ (accessed 12 October).

³² fcai.com.au/Safety/ATV-safety (accessed 12 October 2017).

- issuing a compulsory recall notice to suppliers (in relation to goods only)
- in relation to the Commonwealth minister: declaring mandatory safety standards, imposing permanent bans or making information standards.

These specific provisions are considered in circumstances of safety-related market failure. The provisions apply only to 'consumer goods' (and product-related services in certain cases). 'Consumer goods' is defined in section 2 of the ACL as 'goods that are intended to be used, or are of a kind likely to be used, for personal, domestic or household use or consumption'. Consumer goods under the ACL also include ships, aircrafts and other vehicles, such as quad bikes and SSVs.

In relation to recalls, under section 128 of the ACL, a supplier can voluntarily take action to recall consumer goods of a particular kind if:

- a) the goods will or may cause injury; or
- b) a safety standard for such goods is in force and the goods do not comply with the standard; or
- c) an interim ban or a permanent ban on such goods is in force.

Suppliers are also required, under section 131 of the ACL, to report, to the Commonwealth minister, consumer goods associated with death or serious illness or injury unless an exemption applies (such as where the supplier is already subject to a notification requirement under a state or territory law specified in the regulations).

There are currently no safety standards made under the ACL in respect of quad bikes. Under section 104 of the ACL, a safety standard may impose certain requirements that 'are reasonably necessary to prevent or reduce risk of injury to any person'. A safety standard can include requirements for the performance, composition, contents, method of manufacture or processing, design, construction, finish or packaging of consumer goods. In relation to quad bikes, a safety standard could prohibit unsafe design features or mandate requirements for quad bike design or construction.

A safety standard can also require the testing of consumer goods during or after the completion of manufacture or processing. In relation to quad bikes, a safety standard could require the testing of quad bike models after manufacture to attribute a safety rating to the vehicles.

A safety standard can also require the form and content of markings, warnings or instructions to accompany consumer goods. For quad bikes, a safety standard could require suppliers to display the results of the safety rating attributed to their quad bike models or warnings or instructions to be affixed to the quad bike or provided at the point of sale.

A safety standard could not impose age restrictions on quad bike use, mandate training or passenger restrictions, mandate speed limits or impose personal protection equipment requirements (such as helmets) on users of quad bikes.

8. Other government initiatives

The Commonwealth and state and territory governments have implemented numerous initiatives to increase quad bike safety awareness. In particular:

- In 2012 the Australian Government (via Safe Work Australia) launched 'QuadWatch', a website dedicated to providing work health and safety information, relevant data and guidance about managing risk associated with quad bikes. It also sets out the existing initiatives in the jurisdictions and contact details for state and territory regulatory bodies. Safe Work Australia has also published guidance material for quad

bike use including guidance on managing the risks of machinery in rural workplaces.³³

- In 2012 the Heads of Workplace Safety Authorities (HWSA) commissioned UNSW TARS to examine design solutions to improve the safety of quad bikes. Funding was provided by the WorkCover Authority of New South Wales and also supported by the New South Wales state government, HWSA and the ACCC. The final research results were released in August 2015.³⁴
- Since 2013 the ACCC has been promoting quad bike safety through a number of initiatives including a summer awareness campaign and the release of a YouTube video 'Quad bike safety – would you risk it?'³⁵ This video highlighted the risks to riders who were not wearing adequate personal protective equipment, the dangers associated with children operating adult-sized quad bikes and the risks to riders attempting to navigate unsafe terrain.
- In 2013 the ACCC commissioned the CARRS-Q to examine recreational quad bike related injury patterns and trends in Australia and contributory factors.³⁶ In the same year, the ACCC commissioned Colmar Brunton to undertake a survey on the behaviours and attitudes of Australian recreational quad bike users.³⁷
- In July 2016 SafeWork NSW introduced a quad bike safety improvement program that offers NSW farmers and small businesses quad bike safety rebates and training packages. Rebates are offered for approved alternate vehicle or OPDs fitted to existing quad bikes. Farmers and farm workers are also offered a rebate towards the purchase of compliant helmets or one is provided free with an eligible training course. In May of this year NSW launched a communication campaign across regional NSW involving television, print, radio and social media to raise safety issues and increase rebate awareness.³⁸
- WorkSafe Victoria introduced a quad bike safety rebate scheme in October 2016. Under the scheme, farmers can apply for a rebate for the purchase of an alternate vehicle or OPDs for existing quad bikes. WorkSafe Victoria also accepts OPDs fitted to a quad bike as part of the solution to controlling the risk to operators in the event of a rollover. Victoria has also launched a communication campaign across regional Victoria involving television, print, radio and social media to raise rebate awareness. WorkSafe Victoria also attends regional field days and engages directly with farming communities.
- SafeWork SA sponsored a study by the University of Adelaide's Centre for Automotive Safety Research in 2016: Quad bikes in South Australia: an investigation of their use, crash characteristics and associated injury risks. The study examines the circumstances of fatal and non-fatal quad bike incidents in South Australia.³⁹

³³ safeworkaustralia.gov.au/doc/guide-managing-risks-machinery-rural-workplaces (accessed 1 November 2017).

³⁴ Grzebieta R, Reznitzer G, Simmons K and McIntosh AS, University of New South Wales Transport and Road Safety Research Unit, *Final Summary Project Report: Test Results, Conclusions, and Recommendations* (Quad Bike Performance Project, TARS Research Report No 4, 2015) provided to WorkCover Authority of New South Wales

³⁵ Available at: productsafety.gov.au/about-us/videos/quad-bike-safety-would-you-risk-it.

³⁶ The Centre for Accident Research & Road Safety-Queensland, a joint initiative of Queensland University of Technology and the Motor Accident Insurance Commission, *Recreational Quad Bike-related Injuries in Queensland: Patterns and Contributory Factors* Report 1 submitted to the ACCC May 2015, Report 2 submitted to the ACCC June 2015.

³⁷ Colmar Brunton, *Recreational Quad Bike Usage*, submitted to ACCC 26 March 2013, available at: productsafety.gov.au/system/files/Quad%20bikes%20-%20Consumer%20research%20report%20-%20March%202013.pdf.

³⁸ safework.nsw.gov.au/health-and-safety/safety-topics-a-z/quad-bikes/quad-bike-safety-improvement-program-FAQs (accessed 17 October).

³⁹ Wundersitz LN, Doecke SD, Raftery SJ, Harrison J, CASR, Quad Bikes in South Australia. An Investigation of their Use, Crash Characteristics and Associated Injury Risks' (CASR134, 2016) provided to SafeWork SA.

- Workplace Health and Safety Queensland has a *State-wide Plan for Improving Quad Bike Safety in Queensland 2016-2019*. A major part of this plan is the Ride Ready awareness campaign, which aims to raise awareness of the risks associated with quad bike use and improve rider's safety skills.
- In late 2016, a Taskforce within the Tasmanian Department of Justice was established to investigate ways of improving safety outcomes for quad bike users. In early 2017, the Taskforce released an Issues Paper for consultation: 'Quad Bike Safety in Tasmania'. The Issues Paper received 22 public submissions.⁴⁰
- WorkSafe Tasmania and the Department of Primary Industries, Parks, Water and the Environment (DPIPWE) run a joint initiative, the *Safe Farming Tasmania Program*, to provide training and educational resources to farmers including on the safe use of quad bikes. On 12 October 2017 a suite of worker induction materials, including videos and handbooks were released as part of the safe farming initiative.

9. UNSW TARS Quad Bike Performance Project

The UNSW TARS Project has developed a consumer safety rating system for quad bikes and SSVs. The TARS Project's research and physical test program involved over 1,000 tests carried out at a Crashlab facility in New South Wales. The TARS project also involved the examination and analysis of 109 selected coronial case files collected from around Australia and workplace injury and hospital admissions data.

The TARS Project allocates a star rating to 16 quad bikes and SSVs that were on sale in Australia at the time of testing, where a higher star rating represents a lower risk of rollover and subsequent potential injury. The star rating is derived from three engineering and design features: static stability, dynamic handling and rollover crashworthiness. The TARS Project report emphasises that besides informing consumer's purchases, a star rating system, if adopted, could generate corresponding incentives and competition amongst the industry for improved, safer designs and models related to rollover crashes. The Project makes a number of conclusions from its research, and draws on these to make recommendations to improve quad bike safety beyond a star rating system.⁴¹

The FCAI has opposed the TARS Project contending that the research undertaken does not provide an accurate indicator of comparative vehicle characteristics.⁴² The FCAI considers that the star rating system proposed by UNSW TARS does not relate testing outcomes – and therefore vehicle characteristics – to real world data. Therefore, the FCAI is of the view that it cannot inform quad bike customers about the relative safety of one quad bike versus another.

The FCAI objections to the TARS Project have also received criticism.⁴³

⁴⁰ consumer.tas.gov.au/product_safety/quad_bike_safety_taskforce2 (accessed 16 October 2017).

⁴¹ Grzebieta R, Rechnitzer G, Simmons K and McIntosh AS (2015) 'Final Summary Project Report: Test Results, Conclusions, and Recommendations', Quad Bike Performance Project TARS Research Report No 4, submitted to the WorkCover Authority of New South Wales, University of New South Wales, Sydney, Australia.

⁴² fcai.com.au/Safety/ATV-safety (accessed 12 October 2017).

⁴³ See for example: Wordley, S (2013) Quad bike Crush Protection Devices (CPDs): Updates to ISCRR Snapshot Review C-I-12-022. Institute for Safety, Compensation and Recovery Research, submitted to WorkSafe Victoria, Monash University, Melbourne, Australia, or Wordley S, Field B (2012) *Quad bike safety devices: A snapshot review*. Institute for Safety Compensation and Recovery Research, submitted to WorkSafe Victoria, Monash University, Melbourne, Australia.

Case Study: Quad Bike Tour Company

This Case Study is taken from a sub-study undertaken by the TARS Project as part of its survey on quad bikes used in the workplace.

A quad bike tour company receives around 25,000 guest riders each year for quad bike tours along a beach and associated sand dunes and hinterland.

From the mid-1990s to the mid-2000s, the tour company estimated they were experiencing approximately 120-130 incidents per year. Of those incidents, around 30 riders required first aid, a further 20-30 guests required the assistance of an ambulance and in 2-3 very serious cases each year, guests required medical evacuation by helicopter to the nearest trauma hospital.

The company implemented a range of treatments to improve the safety of their tours, including:

- quad bike tracks and trails were formalised, some with strict one-way circuits and more dangerous areas placed off-limits unless riders were experienced
- introducing a comprehensive pre-ride instruction including practical tests of starting, stopping and steering, before being allowed on the tour (regardless of whether they had ridden a quad bike previously, or not)
- speed limits were imposed and enforced along the quad bike trails
- all riders were required to wear AS:1698 compliant helmets, properly secured.

Despite these improvements, the staff continued to observe serious injury crashes.

In around 2005, all quad bikes owned by the company were fitted with an after-manufacture OPD in an attempt to redress the major injury incidents. The company found despite a significant increase in its operation size, the number of reported incidents per year remained the same, with a major proportionate reduction in both injuries and injury severity. The company's managing operator reported that there are still around 120 accidents annually. However, of these incidents, no guests have required helicopter evacuation, and on average each year: 2 guests require first aid treatment and 3 require the assistance of an ambulance. The TARS Project reports that for this company, OPDs appear to be effective in reducing the harm to riders overall by at least a factor of 6-10 times.

10. Industry initiatives

Five FCAI members (BRP, Honda, Kawasaki, Suzuki, and Yamaha) have developed a website atvsafety.com.au to help quad bike users make informed decisions about the use of, and modifications and additions to, their vehicles. The website provides safety information, including a '5 Star ATV Safety' video.

The FCAI members stress in their quad bike operator manuals the need to wear helmets, and that no person under 16 years of age should ever operate an adult-sized quad bike. This information also features in warning decals displayed on quad bikes.

The FCAI has also promoted the wearing of helmets through the 'Shark Drak SSV helmet giveaway promotion', where a free Shark Drak ATV SSV helmet was provided from 1 September 2017 to 30 September 2017 with the purchase of a new BRP, Honda, Suzuki or Yamaha utility quad bike or SSV (excluded kids, youth and sport models).⁴⁴

The National Farmers Federation (NFF) has called for a comprehensive strategy to improve quad bike safety⁴⁵ including safe design improvements such as the use of CPDs. The NFF also supports better information on safety being provided to consumers through a five star safety rating system. The Country Women's Association of NSW has also been a vocal advocate for a national consumer safety rating system.

The Royal Australasian College of Surgeons has called for action to address child quad bike deaths including prohibiting children from under the age of 16 from operating adult-sized quad bikes, implementing stability and rollover protection design improvements and the introduction of a safety rating system.⁴⁶ A number of other hospital and health bodies support introducing legislation prohibiting children under the age of 16 from riding quad bikes, including: the Royal Children's Hospital; Ambulance Victoria; KidSafe; and the Australian Medical Association.

⁴⁴ fcai.com.au/Safety/ATV-safety (accessed 12 October 2017).

⁴⁵ Letter received by ACCC from Farm Safe Australia and National Farmers Federation on 26 July 2017.

⁴⁶ Royal Australasian College of Surgeons, 'Surgeons call for action on child quad bike deaths', Media release, 3 August 2015 surgeons.org/media/21933148/AAAA-Surgeons-call-for-action-on-child-quad-bike-deaths-3815.pdf.

11. International approaches

11.1. Quad bike design standards

The ACCC is aware of three standards regulating quad bike design features: US, European Union (EU) and Israel. The EU standard mirrors the design standards implemented in the US.⁴⁷

United States

In 1987, the US government commenced an action against major quad bike manufacturers, alleging that quad bikes constitute an imminent hazard within the meaning of the US *Consumer Product Safety Act 1972*. In 1988, these actions were settled through consent decrees negotiated between the US Department of Justice and representatives of the quad bike industry. Under the consent decrees, the industry agreed to:

- cease production and sale of new 3-wheeled quad bikes (but not to recall old ones)
- implement a free national rider-safety training program available to all quad bike purchasers and their families
- implement a major public awareness campaign
- implement age recommendations for operating quad bikes to prevent children from riding the wrong sized quad bikes
- implement quad bike labelling, owner's manuals and point of purchase materials to effectively inform quad bike operators of the hazards of quad bike usage and protection options available
- develop a voluntary standard to make quad bikes safer.

The consent decrees expired in 1998. At that time, most manufacturers agreed to an ATV Action Plan which included not marketing or selling 3-wheeled quad bikes, or adult-size quad bikes for use by children younger than 16. They also agreed to promote training and conduct safety education campaigns.

This voluntary standard led to the development of a mandatory ATV standard approved by the American National Standards Institute and introduced through section 42 [15 U.S.C. §2089] of the *Consumer Product Safety Act 1972*. The current US mandatory standard, ANSI/SVIA-1-2010 for Four-Wheel All-Terrain Vehicles Equipment Configuration, and Performance Requirements (US Standard) applies only to four-wheel ATVs. It includes mandatory requirements for the design and construction, security, provision of information at point of sale and labelling of quad bikes. The American National Standards Institute issued a 2017 edition of its standard in June 2017 (the ANSI/SVIA-1-2017). It is likely the mandatory standard will be amended to reference this update.

As the US dominates quad bike market sales, most vehicles are designed to satisfy the US Standard. It is estimated that greater than 95% of quad bikes imported into Australia meet the US Standard.⁴⁸ At present, no quad bikes are designed or manufactured in Australia.

The US also has a voluntary standard for recreational off-highway vehicles, ANSI/ROHVA 1-2016. This covers design, configuration and performance aspects of recreational off-highway

⁴⁷ Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles, Commission Implementing Regulation (EU) 2016/1825 of 6 September 2016 amending Implementing Regulation (EU) No 901/2014 with regard to the administrative requirements for the approval and market surveillance of two- or three-wheel vehicles and quadricycles.

⁴⁸ Submission by Australian Centre for Agricultural Health and Safety for the Consultation Paper on *Motor Vehicle Standards Act 1989*.

vehicles, including requirements for ROPSs, accelerator, clutch and gearshift controls and lateral and pitch stability.⁴⁹

Israel

Israel has regulations that require quad bikes to be registered and riders to be licensed.⁵⁰ One of the conditions of licence and registration is that a Rear Safety Frame is installed on the vehicle.⁵¹ The Rear Safety Frame is also subject to a specific design standard that, among other things, mandates attachment mechanisms and materials, minimum dimensions and requirements for the frame to withstand loads without residual deformation.⁵² Welding of a Rear Safety Frame must also only be carried out by manufacturers licensed by Israel's Ministry of Transport.⁵³

11.2. Transport rules relevant to quad bikes

United States

US transport laws vary between each state. In 2010, 'Sean's Law'⁵⁴ banned children under 14 from riding quad bikes in Massachusetts (unless supervised and involved in a racing event that had been approved by a municipal permitting authority). In addition, Massachusetts has mandated training for children 14-17 years old, required registration and helmets and restricted children to vehicles with engine displacements <30cm³. It also increased penalties for adults who allow children to ride quad bikes.

In October this year, the journal *Paediatrics* published an article analysing the Massachusetts emergency department and inpatient discharges between 2002 and 2013. It reported that restricted off-road vehicle related injuries for youth under 18 years old significantly declined after the passage of Sean's Law.⁵⁵ The article finds that emergency department discharges: declined by 33% in 0-9 year olds, declined by 50% in 10-13 year olds and declined by 39% in 14-17 year olds.⁵⁶

United Kingdom

The United Kingdom (UK) has different requirements for quad bikes depending on if they are used for recreational or agricultural applications. Quad bikes used for agricultural purposes must be registered, and must meet particular requirements regarding licence plates and headlights if they are to be used on public roads. Quad bikes registered for agricultural use must not be operated by someone under the age of 17 and are not allowed to be operated with a passenger. Recreational quad bikes have greater restrictions including the requirement to have a Ministry of Transport test to confirm the bike's safety, roadworthiness and exhaust emission factors.⁵⁷ Mandatory helmet laws only apply in Northern Ireland. Similarly to Australia, the UK does not regulate quad bikes used off-road on private properties outside of commercial or workplace contexts.

⁴⁹ rohva.org/#/ansi (accessed 17 October).

⁵⁰ As per *Transport Regulations Amendments 2014* (Israel).

⁵¹ *Transport Regulations Amendments 2014* (Israel).

⁵² Manufacturing and Installation of Safety Frames for Quad Bikes Code – 72, Specifications Document No.3876 (2005).

⁵³ Manufacturing and Installation of Safety Frames for Quad Bikes Code – 72, Specifications Document No.3876 (2005).

⁵⁴ General Laws, Part I (Administration of the Government) Title XIV (Public Ways and Works), Chapter 90B (Motorboats, Other Vessels and Recreational Vehicles), Section 26 (Prohibited or limited operation by underage persons; restrictions) (Commonwealth of Massachusetts, US).

⁵⁵ Michael R. Flaherty, Toby Raybould, Cassandra M. Kelleher, Raghu Seethala, Jarone Lee, Haytham M.A. Kaafarani, Peter T. Masiakos 'Age Legislation and Off-Road Vehicle Injuries in Children' *Pediatrics*, Oct 2017, 140 (4) e20171164; DOI: 10.1542/peds.2017-1164. Available: pediatrics.aappublications.org/content/pediatrics/140/4/e20171164.full.pdf.

⁵⁶ Michael R. Flaherty, Toby Raybould, Cassandra M. Kelleher, Raghu Seethala, Jarone Lee, Haytham M.A. Kaafarani, Peter T. Masiakos 'Age Legislation and Off-Road Vehicle Injuries in Children' *Pediatrics*, Oct 2017, 140 (4) e20171164; DOI: 10.1542/peds.2017-1164. Available: pediatrics.aappublications.org/content/pediatrics/140/4/e20171164.full.pdf.

⁵⁷ gov.uk/quad-bikes-the-rules (accessed 17 October).

New Zealand

New Zealand requires riders to hold driver's licences and quad bikes to be registered and licensed if used on public roads.⁵⁸ Approved safety helmets must be worn when riding on the road⁵⁹ and there is a specific design standard for off-road quad bike helmets (NZS 8600:2002). New Zealand also requires the quad bike owner to maintain a warrant of fitness, which is a vehicle safety inspection, if the quad bike is used for tourism ventures or recreational use. Further, if a quad bike is used in a commercial service and ridden on public roads, a Transport Service Licence must be obtained.

South Africa

South Africa has in effect banned quad bikes from being driven on public roads.⁶⁰

Canada

Quebec, Canada has significant legislation in place regulating quad bike use. Quebec requires riders of quad bikes to be at least 16 years old (or for modified quad bikes, 18 years), requires drivers aged 16-17 years old to obtain a certificate of competence and forbids riders under 18 years old from carrying passengers.⁶¹ Quebec law also requires significant personal protection equipment to be worn including: a helmet that meets the relevant safety standard, protective goggles if the helmet does not have an inbuilt visor and closed footwear. All quad bikes must be registered and riders must have a valid driver's or probationary licence. Quebec also requires riders to have civil liability insurance for at least \$500,000 (Canadian dollars) and mandates certain fittings on the vehicle. It also has speed limits for residential and non-residential areas and fines apply if riders do not carry proof of insurance, registration, proof of age documentation, a driver's licence or a certificate of competence and knowledge (if 16 or 17 years old).

12. Inter-Departmental Committee on Quad Bikes, Technical Review Group and ACCC safety investigation

In response to coronial recommendations that Safe Work Australia work with other agencies to develop a consumer safety rating system for quad bikes, the Chair of Safe Work Australia wrote to the Commonwealth Minister for Employment, the Hon. Senator Michaelia Cash, seeking her agreement for the Commonwealth to establish an Inter-Departmental Committee (IDC) to consider the development of a quad bike safety rating system.

The IDC, chaired by the Department of Employment, was established in 2017. The members of the IDC are:

- Commonwealth agencies: Department of Employment; Department of Infrastructure and Regional Development; Department of Agriculture and Water Resources; ACCC; and Safe Work Australia.
- state and territory agencies: Three state/territory work health and safety regulators nominated by the HWSA: SafeWork NSW; WorkSafe Victoria; and WorkSafe Tasmania.

The work of the IDC is supported by the Australian Ministers for Consumer Affairs who, on 1 August 2017, agreed to 'support all steps necessary to expedite the regulatory impact

⁵⁸ nzta.govt.nz/vehicles/vehicle-types/quad-bikes-and-atvs/ (accessed 17 October).

⁵⁹ Except farmers travelling slower than 30km/hr from one part of their farm to another or to an adjoining farm.

⁶⁰ Only quad bikes that have a driving axle fitted with a differential may be driven on public roads. Most quad bikes therefore are only able to be driven off-road.

⁶¹ saaq.gouv.qc.ca/en/road-safety/modes-transportation/all-terrain-vehicle/what-the-law-says/ (accessed 17 October).

assessment process and any other safety measures necessary to introduce a consumer safety quad bike rating system and a safety standard'.⁶²

IDC members will provide input into the ACCC's safety investigation including the possible development of an Australian safety rating system for quad bikes, similar to the Australasian New Car Assessment Program (ANCAP) safety rating system for cars. The IDC has also established a Technical Review Group (TRG). The TRG includes members nominated by UNSW TARS and the FCAI, who will provide technical advice to the IDC on the questions set out in this Issues Paper, and evaluate the appropriateness of the UNSW TARS safety rating system as a model safety rating system. That advice will inform the IDC's input into the ACCC's safety investigation.

Following consultation and the TRG's technical advice on this Issues Paper, the ACCC intends to:

- release a Draft Recommendation in early 2018 for public consultation and technical advice by the TRG
- provide its Final Recommendation to the Minister for Small Business by mid- 2018.

IDC members are also separately considering other complementary measures such as training requirements, use restrictions (e.g. age), and safety protection (e.g. helmets).

13. Economic cost of deaths and injuries

13.1. Economic cost of deaths

On average every year, there are approximately 17 deaths in Australia associated with riding quad bikes.⁶³ The TARS project estimates there to be a further 1400 emergency department presentations from injuries sustained while using quad bikes and SSVs each year.⁶⁴

OBPR guidance on how to treat the benefits of regulations designed to reduce the risk of physical harm uses an estimate of \$4.2 million (2014) based on empirical evidence for the value of a statistical life.⁶⁵ Escalated to June 2017 dollars, this figure becomes \$4.52 million.⁶⁶

- Value of a statistical life \$4.52 million x 17 deaths = \$76.84 million per annum.

13.2. Economic cost of injuries

For the purpose of providing an indication of the current costs associated with incidents on quad bikes that involved hospitalisation in Australia, the ACCC has prepared a snapshot of the average cost of quad bike injuries in Australia per year. Data obtained from VISU provided an indication of the nature of the main injury caused by 437 quad bike incidents in Victoria where the rider was admitted to a hospital. Disability-adjusted life year (DALY) provides an estimate of the burden attributable to 200 diseases and nearly 30 risk factors,

⁶² consumerlaw.gov.au/communiqués/meeting-9-2/ (accessed 12 October 2017).

⁶³ Yearly average based on 114 deaths from 2011-2017 (SafeWork Australia).

⁶⁴ This figure is based on extrapolating population and injury data from emergency department presentations for NSW - Grzebieta R, Rechnitzer G, Simmons K and McIntosh AS, University of New South Wales Transport and Road Safety Research Unit, *Final Summary Project Report: Test Results, Conclusions, and Recommendations* (Quad Bike Performance Project, TARS Research Report No 4, 2015) provided to WorkCover Authority of New South Wales p 28.

⁶⁵ In 2014 the Office of Best Practice Regulation in the Department of Prime Minister and Cabinet (https://www.pmc.gov.au/sites/default/files/publications/Value_of_Statistical_Life_guidance_note.pdf, accessed 19 October 2017).

⁶⁶ the figure of \$4.2 million is adjusted for CPI from June 2014 dollars to June 2017 dollars (abs.gov.au/websitedbs/d3310114.nsf/home/Consumer+Price+Index+Inflation+Calculator, accessed 19 October).

where 1 DALY represents 1 year of healthy life lost.⁶⁷ DALY and the Victorian data was used to provide an estimated weighted average DALY for quad bike injuries across all of Australia.⁶⁸ Further work is being undertaken by the ACCC to provide more accurate indications of the injury costs caused by quad bikes.

Table 6: Quad bike injuries by nature: 1 July 2011 to 31 June 2016

Nature of injury (main injury)	Percent ⁶⁹	DALY weight
Fracture	49.7	0.234 ⁷⁰
Open wound	9.8	0.108
Intracranial injury	6.6	0.354 ⁷¹
Superficial injury	6.4	0 ⁷²
Injury to internal organs	5.7	0.208 ⁷³
Dislocation, sprain & strain	4.3	0.071 ⁷⁴
Injury to muscle & tendon	4.1	0 ⁷⁵
Other and unspecified injury	11.2	0.235 ⁷⁶

The DALY weight multiplied by the percent of injuries associated with that type of injury produces an overall weighted average DALY of 0.192.

- Cost = (DALY weight x value of life year x average duration) x number of injuries per year

$$= (0.192^{77} \times \$190,000.00^{78} \times 0.040^{79}) \times 1400^{80}$$

⁶⁷ Haagsma JA, Graetz N, Bolliger I, Naghavi M, Higashi H, Mullany EC, et al. 'The Global Burden of Injury: Incidence, Mortality, Disability-adjusted Life Years and Time Trends from the Global Burden of Disease study 2013' (Feb 2016) 22(1) *Injury Prevention* 3–18.

⁶⁸ Victorian Injury Surveillance Unit (VISU) at Monash University showed 437 hospital admissions relating to quad bike injuries in Victoria from 1 July 2011 to 31 June 2016. Therefore the percentage of the nature of injuries was assumed to be representative of the 889 injuries that occurred across Australia. Given the nature of quad bike injuries is the same across States and Territories, the ACCC believes the data to be reasonably representative of injuries across Australia; it is also the best indication the ACCC possesses.

⁶⁹ Data provided from VISU (outlined above at footnote 54) provided data for 97.8% of injuries, leaving 2.2% of injuries to be of an unknown nature.

⁷⁰ Average of all possible fractures.

⁷¹ Average of short-or long-term intracranial injury.

⁷² Attributed superficial injuries at a DALY weight of 0.

⁷³ Internal injuries weight used.

⁷⁴ Average of sprains and dislocation ('shoulder, elbow or hip' and 'other dislocation').

⁷⁵ Attributed a DALY weight of 0 to muscle and tendon injuries.

⁷⁶ Average of all possible DALY weights used.

⁷⁷ An average has been used to calculate a number of DALY weights. This leads to obvious limitations given some injuries are more common than others. However, given the intention to provide an indicative nature only, and given superficial injuries and muscle & tendon injuries have been attributed a DALY weight of 0, the ACCC still believes the calculations to be based on reasonably conservative figures.

⁷⁸ In 2014 the Office of Best Practice Regulation in the Department of Prime Minister and Cabinet calculated the value of statistical life year to be \$182,000 (pmc.gov.au/sites/default/files/publications/Value_of_Statistical_Life_guidance_note.pdf, accessed 19 October 2017) the figure of \$190,000 is adjusted to June 2017 CPI (abs.gov.au/websitedbs/d3310114.nsf/home/Consumer+Price+Index+Inflation+Calculator, accessed 19 October).

⁷⁹ This amounts to just over 14 days. The data from VISU also showed that 34.3% of injuries were 'serious' and 65.7 were 'other'. Safe Work Australia attributed 5.6 weeks as the median number of weeks lost from serious compensation claims in its most recently published figures of 2013-14 (safeworkaustralia.gov.au/statistics-and-research/statistics/disease-and-injuries/disease-and-injury-statistics accessed 19 October), accordingly, 5.6 weeks was used to account for 34.3% of

= \$2.04 million per annum

- Value of medical costs $\$4,505^{81} \times 1400 = \6.31 million per annum.

13.3. Total Costs

Based on the above, the total cost of quad bike deaths and injuries in Australia per year is estimated to be \$85.19 million.

The figures are likely to be a significant underestimate because they:

- reflect only deaths and injuries that the ACCC is aware of
- do not take into account broader factors such as social impacts, economic impacts (including loss of income and tax revenue), and the financial impact on suppliers of quad bikes from the possible decline in consumer confidence in the industry.

The figure of \$85.19 million (2017 AUD) can be contrasted to the total retail value of quad bikes forecasted to be sold in Australia in 2017 of \$258.7 million⁸².

Question

- 1) Can you provide additional data or information on costings of injuries and fatalities caused by quad bikes?

14. Policy considerations

To recap, there are currently no safety standards made under the ACL in respect of quad bikes. Under section 104 of the ACL, a safety standard may impose certain requirements that 'are reasonably necessary to prevent or reduce risk of injury to any person'. A safety standard under the ACL can include requirements:

- for the performance, composition, contents, method of manufacture or processing, design, construction, finish or packaging of consumer goods. In relation to quad bikes, a safety standard could prohibit unsafe design features or mandate requirements for quad bike design or construction.
- the testing of consumer goods during or after the completion of manufacture or processing. In relation to quad bikes, a safety standard could require the testing of quad bike models after manufacture to attribute a safety rating to the vehicles
- the form and content of markings, warnings or instructions to accompany consumer goods. For quad bikes, a safety standard could require suppliers to display the results of the safety rating attributed to their quad bike models or warnings or instructions to be affixed to the quad bike or provided at the point of sale.

injuries. The VISU data also showed 51% of quad bike accident injuries involved a length of stay of less than two days in the hospital. 2 was therefore used to account for 65.7% of the injuries.

⁸⁰ The UNSW TARS Project's estimate of 1400 injuries per year includes both SSVs and quad bikes emergency department presentations. The ACCC has used it as an estimate of quad bike injuries alone. Given the statistic relates to emergency department presentations, the ACCC considers the estimate of 1400 injuries to still be reasonably conservative as it has not accounted for injuries sustained by riders where the rider did not visit an emergency department but still received other medical attention or sustained other injuries. SSVs are also generally accepted to be the cause of fewer injuries than quad bikes.

⁸¹ \$4,420 was the national average in 2016 AUD for public hospital service provided to acute admitted patients whose treatment was eligible for Activity Based Funding (myhospitals.gov.au/our-reports/cost-of-acute-admitted-patients/april-2016/report accessed 19 October). It is likely most injuries would fall within this service. The figure of \$4,505 is adjusted to June 2017 CPI (abs.gov.au/websitedbs/d3310114.nsf/home/Consumer+Price+Index+Inflation+Calculator, accessed 7 November).

⁸² Global Market Insights, *ATV Market Report* (2017) p 88.

We are also considering whether SSVs should be included in any safety standard, if recommended

A safety standard under the ACL could not impose age restrictions on quad bike use, mandate passenger restrictions, mandate speed limits or impose personal protection equipment or training requirements on users of quad bikes.

Accordingly, the ACCC's focus is on whether there are design solutions, testing requirements or accompanying information that could reduce the hazards associated with using quad bikes.

Design features

Design features that could increase quad bike safety include:

- a lateral stability specification
- active stability controls that can automatically take control of vehicle systems to minimise rollover risk
- passive stability control systems like operator warnings that sound when slopes that increase rollover risk are encountered
- minimum suspension requirements
- independent rear suspension requirements
- locked/unlocked differentials
- dual wheels
- falling object protective structures
- increasing wheel track width and/or wheel base length
- lowering the centre of gravity
- fitting lights, mirrors and horn
- start-up systems that will prevent a young child starting a quad bike
- seat weight sensors that will prevent a young child riding a quad bike
- modifying the seats to limit space to a single operator
- having weight sensors that will not allow the vehicle to start or be used if above a certain weight
- redesigning carrying racks to restrict the ability to carry passengers and/or make it uncomfortable to use carrying racks as seats
- a requirement that all new quad bikes sold in Australia are equipped with ROPSs or CPDs at manufacture
- a requirement to retrospectively fit ROPSs or CPDs to all quad bikes in use and mandate ROPSs or CPDs on all new quad bikes
- a requirement to ensure quad bikes are able to have CPDs fitted
- foot well design that limits the risk of crush injury to lower limbs
- automated emergency alarms that are initiated in the event of rollover.

Questions

- 2) Would design changes to quad bikes be likely to reduce the number of injuries and fatalities caused by quad bikes in Australia?
- 3) If you answered 'yes' to question 2, what design changes do you consider would have this effect? Which design features, if any, should a safety standard mandate or prohibit? In particular the ACCC is interested in understanding design changes that are likely to reduce:
 - a) injuries and fatalities caused as a result of quad bike rollover
 - b) injuries and fatalities caused to children
 - c) injuries and fatalities caused to riders being carried on quad bikes not designed to carry passengers.
- 4) If your view is that design features should be mandated or prohibited to increase quad bike safety, could the regulation be designed to encourage innovation rather than prescribing particular products or technical solutions (for example by ensuring fitting points or attachment mechanisms to allow the development of improved CPDs or ROPSS or by prescribing performance-based outcomes rather than technical designs)?
- 5) If any or all of these design changes were implemented in Australia, are you able to estimate the additional cost that would be imposed on Australian suppliers?

US Standard

Both the Queensland and the New South Wales Deputy State Coroners recommended that work commence to develop an Australian standard based on the US Standard. The Tasmanian coronial inquiry also recommended that the FCAI and state and Commonwealth industrial safety authorities work collaboratively with a view to initiating the process of implementing a safety and design standard for quad bikes in the terms of the relevant US Standard.⁸³ See section 11.1 for more information on the US Standard.

Questions

- 6) To what extent does the US Standard satisfactorily address design features that ensure quad bikes are safe for use? Do you consider that Australia should adopt a mandatory safety standard similar to the US Standard? To what extent would this option impose additional costs on Australian suppliers or create barriers to trade?

Increased consumer information

Consumer insight research commissioned by the ACCC indicated that 66% of recreational quad bike riders had never seen any information (such as instruction manuals) for how to ride a quad bike⁸⁴ and only 7% of consumers reported they had heard of active riding.⁸⁵

⁸³ *Inquest into the deaths of Heather Dawn Richardson, Jan Severin Jensen, Kendall Russell Bonney, Vicki Mavis Percy, Jay Randall Forsyth, Jacob Graham Green and Roger Maxwell Lerner*. Findings of Coroner Simon Cooper, delivered on 25 August 2017 at State Coroner's Court, Hobart.

⁸⁴ Colmar Brunton, *Recreational Quad Bike Usage*, submitted to ACCC 26 March 2013, p 36, available at: productsafety.gov.au/system/files/Quad%20bikes%20-%20Consumer%20research%20report%20-%20March%202013.pdf.

⁸⁵ Colmar Brunton, *Recreational Quad Bike Usage*, submitted to ACCC 26 March 2013, p 34, available at: productsafety.gov.au/system/files/Quad%20bikes%20-%20Consumer%20research%20report%20-%20March%202013.pdf.

A safety rating system would enable consumers to assess the safety claims and comparative differences of quad bikes in a simple way. This could work in the same way that the ANCAP ratings currently operate for all passenger road motor vehicles sold in Australia.

Policy options to achieve either a consumer safety rating system or increase safety warnings or manuals on the vehicle or supplied at the point of purchase include:

- industry self-regulation where industry develops design standards through forums such as Standards Australia
- a mandatory safety standard which is made by the Minister for Small Business under section 104 of the ACL.

Questions

- 7) Are consumers currently getting adequate information at the purchase point about quad bike use and limitations or safety information and equipment? Should there be additional warnings or instructions displayed at the point of purchase or provided with the sale of quad bikes?
 - a) What form should the warnings or instructions take?
 - b) What costs would be imposed by the requirement for further warnings or instructions?
 - c) What benefits might the warnings or instructions have in reducing quad bike related deaths and injuries?
- 8) In relation to the option of a consumer safety rating system:
 - a) what testing criteria should be specified?
 - b) how should test results be displayed?
 - c) what costs might be imposed by requiring the testing of vehicles and displaying the test results?
 - d) what benefits might a consumer safety rating system have in reducing quad bike related deaths and injuries?

Implementation

In Australia, quad bikes are used for agriculture, recreation, sport, tourism and commercial hire. Quad bikes sold already have varying designs to suit their intended use. Quad bikes designed primarily for recreational use by children may also differ in terms of design features.

If the ACCC recommends a mandatory safety standard be introduced, consideration will need to be given to whether a standard should encompass all quad bike styles and models or whether there should be different requirements depending on the quad bikes use.

Given the small size of the quad bike market in Australia compared to other global markets, and the fact that no quad bikes are manufactured here, a delayed commencement date and transitional period may be necessary to allow manufacturers and suppliers time to implement any changes and undergo testing before quad bikes enter the Australian market.

Questions

- 9) If your view is that regulation is needed to reduce the number of injuries and fatalities caused by quad bikes in Australia, how should these be implemented? One proposed option is to prohibit or mandate particular design features; another is to increase consumer information, including through a consumer safety rating system; a third option is a combination of both:
 - a) what are the comparative benefits and costs of these approaches?
- 10) If the ACCC recommends a mandatory safety standard for quad bikes:
 - a) should the standard apply differently to quad bikes used for different purposes, for example agriculture, sports, recreation, tourism and commercial hire?
 - b) should the standard apply differently to quad bikes designed for use by children?
 - c) should the standard apply to SSVs as well as quad bikes, and if so how should the vehicles be defined?
 - d) when should the standard commence?
 - e) should the standard include a transitional provision?
 - f) should the standard have an expiry date?
 - g) should the standard apply to both new and second hand vehicles, or be limited to new quad bikes sold after the transitional date?
- 11) What is the life cycle of quad bikes in Australia? For example, on average how long do consumers use quad bikes before the vehicle is retired? How long might it take before the current stock of 380,000 quad bikes is replaced by new stock that satisfies requirements of a safety standard, if imposed?
- 12) Please provide any other information you consider may be relevant to the ACCC's consideration of these issues.

15. Next steps

The questions set out above identify the issues that the ACCC is reviewing to develop a Draft Recommendation to the Minister for Small Business. A consolidated list of these questions is included at the beginning of the Issues Paper. The ACCC encourages you to respond to any of the questions that are relevant to you, and to raise any additional issues that you consider relevant.

As outlined in section 10, submissions and the TRG's technical advice to the IDC in response to this Issues Paper will inform the ACCC's development of the Draft Recommendation, including a draft Regulation Impact Statement (RIS) in accordance with OBPR's *The Australian Government Guide to Regulation*.⁸⁶ The ACCC intends to release its Draft Recommendation in the first quarter of 2018 for public consultation, and to then provide a Final Recommendation to the Minister for Small Business by mid-2018.

⁸⁶ pmc.gov.au/resource-centre/regulation/australian-government-guide-regulation (accessed 12 October 2017).

Attachment A Summary of Coronial recommendations

Recommendation	New South Wales	Queensland	Tasmania	New Zealand
Implement a safety rating system to help consumers compare safety of vehicles	✓	✓	✓	x
Implementing a standardised, nationally accredited training package	✓	✓	✓	Training was strongly recommended but not a nationally accredited package
Quad bike mandatory design standard	✓	✓	✓	x
SSV mandatory design standard	✓	x	x	x
CPD mandatory design standard	x	✓	x	NZ should closely monitor Australia's approach
Quad bike helmet safety design standard	✓	✓	Helmets should be used but no recommendation of an Australian standard	A quad bike helmet design standard has been in force since 2002
Commission an independent study of ROPS and CPDs	✓	✓	x	NZ should closely monitor Australia's approach
Implementation of an awareness campaign for children's safety	✓	✓	x	x
Implementation of a public media campaign	✓	✓	x	x
Requirement for mandatory licencing	✓	Certification or licencing	x	✓
Introduction of legislation restricting children's use of quad bikes	✓	✓	✓	x
Introduction of legislation regarding carrying passengers	x	✓	✓	x
An investigation of consumer practices that contribute to accidents	x	✓	✓	x

Attachment B Summary of State and Territory Transport Schemes

Quad bike transport rules by State and Territory

	ACT ⁸⁷	NSW ⁸⁸	NT ⁸⁹	QLD ⁹⁰	SA	TAS ⁹¹	VIC ⁹²	WA ⁹³
Can a quad bike be used on public road?	Yes	Yes if moving from site to site and if there is limited general traffic	Yes but operator is restricted to workers or contractors of the organisation	Yes	Yes	Yes	Yes	Yes
Does the quad bike have to be registered to be used on public road?	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Does the rider have to be licenced to	No	Yes	No	No	No	Yes	Yes. Lerner permit holders not permitted.	Yes

⁸⁷ cdn.justice.act.gov.au/resources/uploads/Worksafe/Publications/Handbooks/WSACT_HB_0027_-_Quad_Bikes_on_Farms.pdf (accessed 17 October), accesscanberra.act.gov.au/app/answers/detail/a_id/2117/kw/non-standard%20vehicle (accessed 17 October).

⁸⁸ rms.nsw.gov.au/roads/registration/get-nsw-registration/vehicle-sheets/all-terrain-vehicle.html (accessed 17 October), rms.nsw.gov.au/roads/registration/get-nsw-registration/vehicle-sheets/recreation-vehicle.html (accessed 17 October).

⁸⁹ nt.gov.au/driving/registration/quad-bikes-and-atvs-conditional-registration (accessed 17 October), nt.gov.au/driving/safety/motorcycles-quad-bikes-and-scooters/quad-bike-safety (accessed 17 October).

⁹⁰ qld.gov.au/transport/registration/register/conditional/about-conditional (accessed 17 October), research.qut.edu.au/carrsq/wp-content/uploads/sites/45/2017/05/Quad-Bike-Safety-print.pdf (accessed 17 October).

⁹¹ worksafe.tas.gov.au/__data/assets/pdf_file/0010/342577/Quad_bikes_on_farms.pdf (accessed 17 October), transport.tas.gov.au/registration/conditional/restricted (accessed 17 October).

⁹² vicroads.vic.gov.au/registration/new-registration/register-non-compliant-vehicles/special-work-vehicles (accessed 17 October), vicroads.vic.gov.au/registration/new-registration/register-non-compliant-vehicles/vehicles-non-compliant-with-australian-standards (accessed 17 October), worksafe.vic.gov.au/__data/assets/pdf_file/0016/211264/ISBN-Quad-bikes-on-farms-handbook-2009-08.pdf (accessed 17 October).

⁹³ transport.wa.gov.au/mediaFiles/licensing/LBU_DL_FS_LicensingQuads_FarmUseOnly.pdf (accessed 17 October), transport.wa.gov.au/licensing/license-an-off-road-vehicle.asp (accessed 17 October).

ride on public road?								
Is there an age limit to ride a quad bike on public road?	No	Yes: Above 16 years	Yes: Above 16 years	No	No	Yes: Above 16 years	Yes. Above 18 years	No
Can the rider carry passenger(s)?	Yes	Yes	Yes	Yes but not children under the age of eight or children of any age if do not meet certain requirements	Yes	Yes but for recreational use no	No passengers are to be carried on public roads.	Yes
Is there a speed limit for public roads?	No	Lesser of 50km/h or the manufacturer's speed limit	Safety limits of the vehicle are not to be exceeded on public roads. If an approved motorcycle helmet cannot be worn because other necessary OH&S equipment prevents it, speed must not exceed 10km/hr on public roads.	No	No	Speed not to exceed the lesser of 40km/h or the manufacturer's maximum recommended speed rating when on public roads.	30km/h through a condition on the permit	Speed limit of 35km/hr on public roads.
Is lighting, mirror and/or	No	Yes	Rotating amber flashing light	No	No	Yes	Yes	No

horn required for public road?			visible from all directions for 200m.					
Is there a time restriction for use on public road?	No	Daylight use only unless vehicle has headlights, tail and number plate lights.	Daylight use only.	No	No	Daylight use only	No	Daylight use only
Is a helmet required on public road?	No	No	Yes	Yes (and passengers) Exemption if the vehicle has factory fitted seatbelts and ROPS.	No	Yes	Yes	Yes Conditionally licenced quad bike riders (if licenced on, or after, 25 July 2011) when riding on public roads. The mandatory helmet requirement does not apply to quad bikes that have been registered for recreational purposes.

Details of State and Territory Initiatives

Jurisdiction	Legislated requirements	Other programs
Vic	<p>A quad bike must be registered by VicRoads and covered by Transport Accident Commission cover to be driven on public roads.</p> <p>A mirror, horn or warning device, braking system and elevated warning lamp must be fitted to drive on public roads.</p> <p>Approved motorcycle helmet required when riding on public roads.</p> <p>No passengers are to be carried on public roads.</p> <p>The quad bike must not tow a trailer or other vehicle with a laden mass >250kgs on public roads.</p>	<p>Up to \$1200 rebate for the purchase of an alternate vehicle (must be designed for agricultural use, have ROPS fitted and a seat belt).</p> <p>Up to \$600 for the purchase of up to two operator protection devices– only two devices meet the required criteria – the Quadbar™ and the ATC Lifeguard.</p> <p>Note: These rebate schemes are only available for farm business and primary producers – they are not available to recreational riders or tourism operators.</p> <p>Communication and awareness program to promote farm safety (including quad bike safety).</p> <p>A risk assessment tool and education and guidance material for employers and quad bike users.</p>
NSW	<p>Conditional registration required to ride on public roads, only available to move from site to site and if there is limited general traffic.</p> <p>Class “C” driver licence required.¹ In effect, this creates an age restriction of above 16 years for riders on public roads.</p> <p>Certain lighting, mirror and horn requirements for conditionally registered vehicles.</p> <p>The lesser of 50km/h or the manufacturer’s speed limit on public roads.</p> <p>Daylight use only unless vehicle has headlights, tail and number plate lights.</p>	<p>Up to \$1000 rebate for each agricultural side-by-side vehicle (SSV) purchased – eligible farming business owners are able to receive two \$1000 rebates.</p> <p>Up to \$500 for each Quadbar™ or ATV Lifeguard Operator Protective Device (OPD) installed.</p> <p>Up to \$90 for each compliant helmet purchased.</p> <p>Free training is available through registered training organisations. Participants also receive a free compliant helmet.</p> <p>100 free training events in regional and remote areas across NSW. Participants also receive a free compliant helmet.</p> <p>Note: These rebate schemes and training are only available for farm business and primary producers – they are not available to recreational riders or tourism operators.</p> <p>Current communication campaign – television, print, radio and social media campaign is underway across regional NSW to raise safety issues and increase rebate awareness.</p>
Qld	<p>Conditional registration required if riding on a public road. This provides compulsory third party insurance.</p> <p>Approved motorcycle helmet required when riding on public roads. Passengers also required to wear an approved motorcycle helmet.</p> <p>Exemptions from wearing an approved</p>	<p>In June 2016, WorkSafe Queensland launched a public awareness campaign called ‘Ride Ready’.</p>

Jurisdiction	Legislated requirements	Other programs
WA	<p>motorcycle helmet apply if the vehicle has factory fitted seatbelts and a ROPS.</p> <p>Children under the age of eight² prohibited from being passengers on public roads.</p> <p>A Farm Use Quad Bike Licence must be issued and requires a rider to wear an approved motorcycle helmet when riding on public roads.³</p> <p>Approved motorcycle helmet required for conditionally licenced⁴ quad bike riders (if licenced on, or after, 25 July 2011) when riding on public roads.</p> <p>The mandatory helmet requirement does not apply to quad bikes that have been registered for recreational purposes.</p> <p>Speed limit of 35km/hr on public roads.</p> <p>Daylight use only.</p>	
SA	<p>Quad bikes used on roads for agricultural, industrial or recreational use must be registered and riders must hold a Class 'C' drivers' licence.¹ In effect, this creates an age restriction of above 16 years for riders on public roads.</p> <p>Approved helmets must be worn on public roads.</p> <p>For recreational use registration, no pillion passengers may be carried.</p> <p>Speed not to exceed the lesser of 40km/h or the manufacturer's maximum recommended speed rating when on public roads.</p> <p>Daylight use only.</p>	<p>Taskforce created in 2016 by the Tasmanian Minister for Building and Construction (responsible for Workplace Health and Safety and Consumer Protection) to extensively consult and investigate ways of improving safety outcomes for quad bike users.</p> <p>The submission period for the Quad Bike Safety in Tasmania Issue Paper closed on 28 February 2017.</p> <p>In October 2017, a suite of worker induction materials, including videos and handbooks was released as part of the Safe Farming initiative.</p>
NT	<p>Conditional registration required to drive a quad bike on a public road.⁵</p> <p>If conditional registration is offered, when riding on public roads, the operation of quad bikes is restricted to workers and contractors of the organisation.</p> <p>Operators must wear an approved motorcycle helmet on public roads.</p> <p>The operator must also hold a current NT "C" class or appropriate "R" class driver's licence.¹ In effect, this creates an age restriction of above 16 years for riders on public roads.</p> <p>If an approved motorcycle helmet cannot be worn because other necessary OH&S equipment prevents it, speed must not exceed 10km/hr on public roads.</p> <p>Requirement to have a rotating amber flashing light visible from all directions for 200m.</p>	

Jurisdiction Legislated requirements**Other programs**

Safety limits of the vehicle are not to be exceeded on public roads.

Daylight use only.

ACT Non-standard vehicle registration required to drive quad bikes on public roads.⁶

¹ Class "C" licence – a normal car licence, enabling owner to drive a vehicle where: gross mass is less than 4.5t, the vehicle contains no more than 12 seats, the license covers tractors, harvesters, front end loaders, road rollers, forklifts and graders. Class "R" licence – a motorcycle licence.

² and children of any age if they cannot sit with their feet flat on the floor and hands on handholds.

³ All quad bikes used on farms must be examined and licenced by the Driver and Vehicle Services, WA.

⁴ If a quad bike has a genuine need to cross or travel on public roads, the quad bike must be examined and licenced. The mandatory helmet requirement only applies to licences issued on, or after, 25 July 2011 because quad bikes licenced prior to this date cannot be readily identified by the vehicle's body code as being a quad bike.

⁵ Conditional registration is only available where it can be demonstrated that a specific work related task cannot be performed in an alternate (safer) vehicle. Task examples include roadside litter collection and weed spraying.

⁶ Unless the user is crossing a road directly, gate to gate. If the gates are offset, the vehicle must have a non-standard vehicle registration. This requires submitting an application that outlines that no complying road vehicle could perform the same function or task. Also requires a certificate of inspection completed by the Access Canberra Motor Vehicle Inspection Station. Each case is subject to assessment and approval by ACT Department of Territory and Municipal Services or the inspectors at the Dickson Motor Registry.