

## Train the Driver Research report



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**Draft Report**

**5<sup>th</sup> June 2020**

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# Executive Summary

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This report summarises the findings of a formative research study undertaken by Social Marketing @ Griffith to examine perceptions and new ways of delivering animal awareness and avoidance strategies through driving instruction. This study followed a mixed method design, with the key component being a qualitative approach. An online survey was distributed by Social Marketing @ Griffith between March-May 2020, to identify stakeholders for in-depth interviews. Supportive quantitative analyses were also provided from this online survey. Once stakeholders were identified, a qualitative approach using in-depth interviewing was conducted to gather deep insights into individuals. In-depth interview participants expressed thoughts, feelings and beliefs surrounding typical driving instruction practices delivered in the Redlands City Council (RCC) area. A total of 491 questionnaires were collected and 14 in-depth interviews were conducted with members of the RCC community including drivers, driving instructors, and other relevant expert stakeholders.

Data collected was used to generate recommendations that could be implemented to promote higher levels of wildlife awareness and to assist to teach drivers to avoid wildlife in the RCC area. Key findings and supporting recommendations include:

- Formal instruction/inclusion of animal awareness & avoidance strategies are not commonly provided to learners in RCC and other Queensland areas;
  - Incentive programs for instructors to include wildlife safe driving practices within standard instruction to the RCC and greater Queensland areas.
- Night-time driving is particularly relevant to movements of crepuscular animals, including kangaroos, koalas and wombats. These services are under delivered in RCC areas;
  - Introduction and encouragement of driving instruction services specifically for night driving conditions are required, as these are under delivered in the RCC areas.
- 'Train the Parent' and school-based learning should be introduced, so that new young drivers are achieving high standard instruction over time;
- New drivers must be incentivised or otherwise strongly encouraged to commit longer driving sessions for logbook requirements, rather than multiple short trips.

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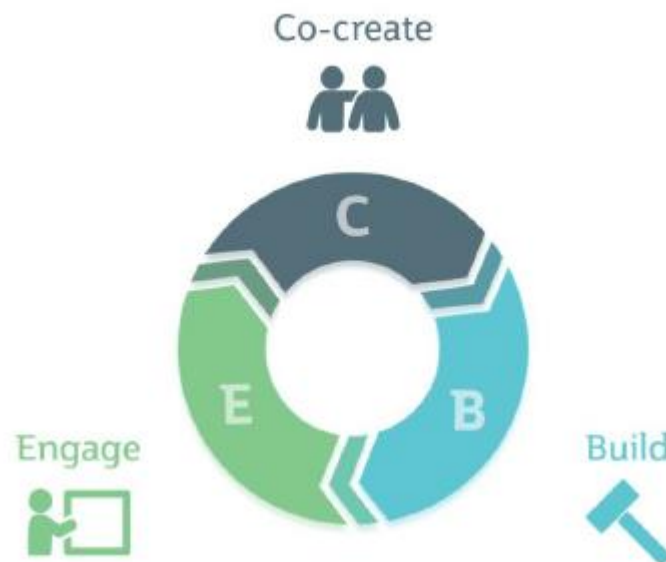
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# Introduction

Social marketing serves in society's interests using solution co-creation (Dietrich et al., 2016). The Co-create-Build-Engage (C-B-E) framework was used by Social Marketing @ Griffith to commence co-creation of a potential Train the Driver program (see Figure 1).

**Figure 1 - CBE framework**



Co-creation (Step 1) ensures that programs are designed by, and not for, people. Co-creation ensures a focus on empowering people giving them an opportunity to influence product and service design. Co-creation focusses on listening and learning to generate insights that underpin objectives and strategy for implementation in projects or business as usual programs. This research project was a co-creation project seeking to determine market potential for a Train the Driver program.

Steps 2 and 3 of the CBE framework are briefly described next before the mixed method research approach applied in this co-creation study is detailed.

Build (Step 2) marks the second step of the CBE process and focuses attention on delivering valued solutions that people will choose. The focus in program build is in ensuring usability is maximised.

Engage (Step 3 is the final stage of the CBE process). Engage focusses on raising awareness, inducing trial, purchase and repeat purchase for the co-designed solution. Engage focuses attention on ensuring that mental and physical availability of the solution is maximised within the available financial and human resources.

Through initial application of the CBE framework, this Social Marketing @ Griffith project sought to listen and learn to generate insights to inform future program planning.

## **Phase 1: Stakeholder identification**

The initial phase of this research was the identification of key stakeholders of safe driving practices. This project sought to understand people with a potential interest in introducing training that enhances driver's animal awareness & avoidance practices while driving.

To identify stakeholders a questionnaire was distributed to current learners, provisional license holders and open license holders living in the Redland City Council area. This survey aimed to identify driving instructors servicing the RCC area.

The questionnaire asked drivers who/which school provided them with professional driving lessons, what topics of instruction were provided, and it examined driver receptiveness to additional content provided in professional driving instruction such as road safety concerning crossing animals, and animal related road accidents.

The overall aim of the online survey in Phase 1 was to identify driving instructors servicing the Redlands local government area with the aim of involving them in the second phase of this research study.

## **Phase 2: Stakeholder interviews<sup>1</sup>**

The second phase utilised in-depth interviews with a range of stakeholders with a potential interest in introducing training that enhances driver's animal awareness & avoidance practices while driving. Stakeholder interviews were conducted in a permissive, non-threatening environment, which aimed to encourage participants to share their thoughts and opinions without fear of judgement.

A diverse range of stakeholders was sought for Phase 2, including drivers, driving instructors and other 'expert stakeholders' from relevant organisations (e.g., RACQ). The purpose of conducting in-depth interviews with the target audience and stakeholders of the RCC area was to better understand how to introduce new driver safety practices to meet the needs and wants of those living in the RCC area.

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<sup>1</sup> COVID-19 prevented co-design sessions from being run and in-depth interviews replaced group sessions ensuring social distancing and lockdown rules did not impact overall project progress.

# Method

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This section of the report outlines the methodology undertaken by Social Marketing @ Griffith in order to collect, analyse and interpret insights regarding drivers, driving instructors, and expert stakeholder's animal awareness and avoidance knowledge. The section is structured according to the sampling, measurement, research procedure and data analysis methods utilised.

## Sampling

### ***Phase 1 Sampling Procedure***

Participants were encouraged to participate in the Phase 1: Stakeholder Identification questionnaire with the chance to win a \$50 Coles e-gift voucher. Survey participants who indicated they wished to be included in the draw and who had fully completed the survey were eligible for the survey draw. A range of convenience sampling strategies were used by the project team to ensure diverse viewpoints were captured in the survey and potential reach within the limited budget was realised (Brewerton et al., 2001). A combination of social media, newsletters and utilisation of mailing lists to reach RCC residents who had agreed to be recontacted for University research were utilised. Each is detailed in turn.

*Social Media:* The stakeholder identification questionnaire was promoted using social media channels. Social Marketing @ Griffith's Facebook page was used to target participants living in the RCC area. To ensure that the questionnaire was being completed by members of the RCC community, RCC postcodes were used to launch a targeted social media post using Facebook Advertisement services. In addition to Facebook, posts were shared by Social Marketing @ Griffith and members of the research team.

*Targeted mailing lists:* Email promotions were crafted using two large pre-existing mailing lists. The first of these were comprised entirely of RCC residents who had previously agreed to be recontacted for research purposes. This list was from Social Marketing @ Griffith research activities previously conducted in the Redlands area. The second list was a Griffith University list targeting students and staff, adopted for its zero-cost/ease of use, and potential to locate further RCC participants studying or working at Griffith University. Both options were launched at the end of April.

*Newsletter:* The survey was featured in one newsletter sent out to dog owners residing in the RCC area under the *Leave It* project. This newsletter featured an audience of 1,580 Redland dog owners.

### ***Phase 2 Sampling Procedure***

*SMS and Phone recruitment:* For participants of the Phase 2: In-depth interviews, a \$50 Coles e-gift card was provided as an incentive to thank people for their support of the research. 53% of survey participants who completed the survey indicated their willingness to participate in Phase 2: Stakeholder Interviews. Survey respondents provided names of driving instructors servicing the RCC area in the survey and this data was used by the project team to contact driving instructors servicing the RCC area. Participants provided contact phone numbers in the questionnaire, and these numbers were then used to recruit via SMS. This initial contact allowed the research team to organise and subsequently carry out telephone interviews.

Across these methods, 608 questionnaires were collected, with 491 questionnaires kept after screening for missing data/invalid entries. An example of an invalid entry could include a participant

entering only some screening data in the beginning of the questionnaire, but then failing to complete questions to provide more substantive insights. Attracting driving instructors involved a combination of direct messaging on websites/Facebook pages of driving schools (if they had one), as well as directly calling driving instructors. Between those provided by the questionnaires, word of mouth, and by Google searching, 14 driving schools were contacted within the RCC area. Of these, 4 were agreed to participate in the in-depth interviews. The remaining instructors contacted did not respond to phone or direct messaging, many of which providing automated messages stating temporary business closure.

## **Procedure**

The measures used in the questionnaire were a mix of outcome expectations, behavioural measures and previously validated psychographic questions (Cialdini et al., 2004; Pang et al., 2018; Rundle-Thiele et al., 2013; Teel et al., 2010). Data were coded and cleaned prior to commencement of data analyses. Descriptive analyses and between group differences were explored for RCC community residents and all other participants based on the measures outlined above.

From stakeholder interviews, the pre-existing groups adopted for recruitment was kept in the data cleaning and analysis stage. These groups broadly included drivers, driving instructors and expert stakeholders. The term 'expert stakeholder' in this case refers to any stakeholders with unique and informed viewpoints regarding driving instruction, road rules, and/or animal awareness. These include participants from the following organisations;

- RACQ
- Queensland Police Service (QPS)
- Queensland Department of Transport and Main Roads (TMR)

## **Data Analyses**

Descriptive and bivariate analyses were used to analyse survey data. In this way, summary understanding of the participants was achieved in a manner that provided a backdrop for the qualitative insights gained through stakeholder interviews, as well as contrasting perceptions regarding animal awareness and avoidance while driving, with actual experience and knowledge of drivers. Crosstabs with chi-squares were included in the analyses to identify differences between RCC and non-RCC residents on their animal avoidance & awareness perceptions, as well as between participant ages and license types. Further t-test and ANOVA analyses sought to identify any statistically significant differences between these groups.

Insights gained from in-depth interviews were analysed drawing on Yin's (Yin, 2015, 2017) qualitative analysis procedures. Responses were grouped by 1) previous experiences/prior perceptions of driving instruction regarding animal awareness and avoidance, 2) perceptions towards driving instruction, and 3) recommendations and ideas for improvement.

# Results

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The following sections summarise the key findings for each phase of the project. The first describes driver perceptions regarding animal awareness & avoidance while driving, and responsibilities towards animal protection. Between groups differences were also scanned for between different ages of participants, license level of participants (i.e., L plates, P1/2, Open licenses), and RCC or non-RCC residency.

Insights derived from stakeholder interviews are then presented, regarding their views on current instruction practice, suggested additions to the service provision of driving instruction, and alternatives to contemporary driving instruction processes.

## **Phase 1 Results**

### ***Demographic profile***

The survey captured personal details to provide a profile of respondents reached during Phase 1: Stakeholder Identification.



**Table 1 - Demographic characteristics**

<i>Participants</i>	
<b>Total sample</b>	n=491
<b>Gender</b>	
Male	41%
Female	59%
<b>Age</b>	
15-24	19.0%
25-34	13.2%
35-44	14.9%
45-54	18.1%
55-64	16.7%
65+	18.1%
<b>License type</b>	
L plates	4.1%
P1	3.5%
P2	5.1%
Open license	87.4%
<b>Education level</b>	
School Education level	13.0%
Certificate Level	11.4%
Diploma or Advanced Diploma	10.0%
Bachelor's Degree	20.4%
Graduate Diploma and/or Graduate Certificate	4.1%
Postgraduate Degree	10.4%
<b>Sources of Instruction/Driver Training</b>	
Driving instructors	64.4%
Parents	65.6%
Siblings	7.3%
Friend/friend of family	17.7%
Other	6.4%
<b>Animal Awareness Training</b>	
Yes	37.2%
No	62.8%
<b>Redland City Council resident</b>	
Yes	12.4%
No	87.6%

The gender of participants was roughly even, with 59% of the sample indicating they were female. The ages of participants were well spread out between older and younger drivers, with the largest group being those between 15-24 years of age at 19% of the sample. In terms of education level, 87% of the sample maintained a 'Certificate' level education or higher. The majority of participants in the questionnaire already acquired their Open license at the time the questionnaire was conducted.

Participants were asked where they received their driving instruction from. The most common response was given for parents, followed closely by driving instructors, at 65.6% and 64.4%

respectively. Among the 'Other' option, a number of unique responses were provided, with the most common response being a past or current partner (n=10).

Survey findings indicate that 62.8% of drivers completing the questionnaire had received no training on how to avoid animals when driving during their training. Taken together, results indicate that driving instruction regarding animal awareness & avoidance is limited for both currently learning and previously trained drivers.

The majority of questionnaire participants were from outside the RCC area; however, these external participants were limited to the population of QLD. This high proportion of non-RCC residents was due to increased sampling outside of RCC (e.g., Griffith University email list), in order to increase the power of statistical inferences. The similarity of RCC to non-RCC participants is discussed below (see 'Between group differences' section).

**Descriptive summary**

Participants were questioned about their perceptions about whether drivers can and should be taught skills to avoid animals while driving (see Table 2). These questions regarding risk perceptions were measured on a 7-point scale of 1 (Totally disagree) to 7 (Totally agree).

**Table 2 – Driver-animal risk perceptions**

	<i>Mean</i>
<b>Risk perceptions</b>	
<b>Driving at night is more dangerous when it comes to wildlife</b>	6.0
<b>Native wildlife such as koalas and wallabies are more active by roads at night</b>	6.0
<b>Drivers should slow down when wildlife is most active</b>	5.8
<b>Drivers can be taught skills to...</b>	
<b>Save wildlife while driving</b>	5.8
<b>Avoid harming wildlife while driving</b>	5.9
<b>Avoid harming themselves or passengers while driving</b>	6.4

Analyses indicate large gaps between driver’s perceptions about avoiding animals on roads, and their experiences of being taught animal awareness & avoidance skills for driving. While the majority of participants did not receive animal awareness training while acquiring their license, participants also believed that skills could be taught to drivers for avoiding animals on the road. In terms of risk perceptions, participants showcased firm understanding that certain animals are more likely to be found by roads at night, and therefore that night driving is more dangerous concerning certain wildlife species (e.g., kangaroos & koalas).

Participants were also asked what they believed to be appropriate methods for avoiding harm to wildlife, drivers and property while driving.

**Table 3 - Animal harm avoidance methods**

	<i>Participants (%)</i>
<b>Avoiding wildlife harm while driving...</b>	
<b>Flash your lights</b>	22.1
<b>Honk horn</b>	26.9
<b>Swerve to avoid</b>	9.8
<b>Slow down</b>	92.3
<b>Hit brakes</b>	17.8
<b>Area awareness</b>	90.4
<b>Pay attention to wildlife signs</b>	89.5

Reducing speed was viewed as the primary method that could be used to avoid harming wildlife while driving, followed closely by awareness of the area being driven in. Swerving to avoid animals received the least approval from participants, with only 10% of participants believing this to be a suitable tactic to avoid harming animals on roads while driving. Some participants offered new methods not listed in the questionnaire, such as dimming lights specifically to avoid startling kangaroos, or installing bull bars to reduce damage to vehicles and/or animals.

#### ***Between group differences***

Analyses were conducted to determine if distinct groups existed within the data set. Namely, potential grouping variables identified included:

- RCC residents versus. non-RCC residents,
- different age groups, and
- different license levels

These grouping variables were compared for the following variables:

- Prior animal awareness & avoidance training
- Risk perceptions (e.g., likelihood of striking animals at night while driving)

No differences between residency status, age group or license level held at time of questioning were identified for prior animal awareness & avoidance training. Similarly, no statistical differences were identified among participants for risk perceptions regarding animal awareness & avoidance for any of these three grouping variables. It is then acceptable to utilise combined data across these demographic characteristics, as they are homogenous.

#### ***Preferred instruction methods***

Participants were asked to consider a series of potential methods for receiving animal awareness & avoidance instruction, and rate which of the methods they would find most preferable.

**Table 4 - Preferences for animal awareness & avoidance instruction**

	<i>Rank</i>
<b>As part of regular expert driving instruction</b>	1 <sup>st</sup>
<b>Wildlife awareness driving course</b>	2 <sup>nd</sup>
<b>From parents, friends or relatives</b>	3 <sup>rd</sup>
<b>Virtual Reality driving simulator</b>	4 <sup>th</sup>
<b>Group seminars/workshops for conservation and wildlife safety in general</b>	5 <sup>th</sup>
<b>Online game/driving simulation</b>	6 <sup>th</sup>

Overall, participants indicated that they would prefer receiving animal awareness and avoidance information as part of regular driving instruction practice, with the second most preferred way being a driving course specifically for wildlife awareness. Digital solutions such as Virtual Reality or online games and simulations, as well as group seminars and workshops were not rated very favourably in comparison.

## **Phase 2 Results**

### ***Experiences with animal incidents***

When asked about personal experience witnessing or being involved in motor vehicle strikes on animals, participants generally indicated that domestic animals (e.g., pet dogs) and crepuscular animals (i.e., kangaroos & koalas) were the most commonly struck animals on roads. It was apparent however that with different species of animals, different strategies for avoidance beyond awareness were required. For instance, an example was provided by one participant regarding snakes and lizards, and that if a driver swerves to avoid a snake or lizard, the driver should aim towards the animal's tail-end. Consequently, by swerving towards the tail-end of snakes and other reptiles crossing roads, the gap is widened between the animal and oncoming traffic, improving the likelihood of motor vehicles avoiding the animal.

*“Koala wandered out on the road and, everybody stopped. And I think this is how it should be.” - Stakeholder*

*“Size is a key factor in reaction” - Stakeholder*

*“Sometimes you don't get time to stop” - Instructor*

*“If there is a snake, it will escape forwards. Drive towards their tails to maximise the gap” - Driver*

*“Only swerve if it is safe to do so” - Instructor*

Aside from species of animal, road conditions were frequently brought up as a key factor in whether an animal can be avoided, even if the driver is aware of them entering the road. These conditions could be the size of the road, the speed limit and other driving conditions, and traffic levels of the road at the time. In contrast to the importance of driving conditions on animal awareness and avoidance, night-time driving instruction was not generally provided or received

*“It depends on the type of road you're on, how fast you're going.” - Driver*

*“Speed could spook the animal and put them on a collision course to the vehicle.” - Stakeholder*

*“I start early in the morning, so I like to stop by around 5 o’clock.” - Instructor*

Drivers were queried about whom to call when dealing with animal strikes, and what the responsibilities of a driver are when making contact with an animal while driving. Generally, participants indicated that if an animal is struck by a motor vehicle that animal wellbeing services be called immediately. However, some scepticism as to these services’ responsiveness, capacity and/or care was called, as previous experiences with these services were unfavourable. Further compounding this issue, some participants recounted a period of instruction where less care was given to animal wellbeing on roads, and subsequently drivers today may not bother to slow down or stop for animals, or to call wellbeing services in the event of an animal strike.

*“take it to a vet if its still alive, try and humanely help it” - Instructor*

*“they [animal ambulant services] do not want to help and they do not want to come out, and they don’t care” - Instructor*

*“When I got my license those signs just weren’t around” - Stakeholder*

### **Changes to driving instruction as usual**

Suggestions to improve driver awareness & avoidance of animals while driving have identified a range of strategies for consideration that could be implemented to prevent harming wildlife. For inclusion in existing formal driving instruction, participants suggest some specific practical testing such as ‘Moose testing’ to improve drivers’ ability to break quickly without causing damage, and ‘motor sport style’ training to improve a driver’s car handling.

*“it’s a good way to test the stability of a car” - Driver*

*“Time in a rally car, you tend to learn fairly quickly when you see something that doesn’t look right”  
- Instructor*

Extra-curricular driving activities were also suggested (e.g., defensive driving courses) as being suitable to learn how to avoid harming animals when driving. Some situation/occupation specific training (e.g., driving in rural/country areas, police level defensive driving) were also identified, with general skills and hazard training suggested as a suitable solution to low animal awareness and avoidance skills

*“Could be applied to a wildlife scenario, but not specifically to just wildlife” - Stakeholder*

*“More about just being aware, more than specifically on animals” - Instructor*

Further, government support such as welfare assistance for new or past drivers to get their license was highlighted, as a means to improve job seeking capabilities. This is then related to the idea that younger drivers may not be able to support themselves to seek more advanced or thorough driving instruction than a few lessons used to increase logbook hours. Through the use of government assistance or schemes, drivers could then be encouraged to pursue more advanced driving instruction to not only improve their awareness and capabilities driving around animals, but also limit the burden on low income drivers to seek such instruction.

*“They [employment agency/Centrelink] provide them with funding for driving instructors, maybe to just get their Learners license” - Instructor*

Participants generally considered that price of any additions to the driving instruction process be low-cost or even free, given most new drivers are adolescents with limited income to support such training. Some instructors believed that overall animal awareness and avoidance is not sufficiently covered in formal driving instruction, and that more involvement between local government and this industry is required to improve overall animal wellbeing and reduce driver-animal road incidents.

*“Government doesn’t utilise our industry enough to educate drivers” - Instructor*

*“The current driving test in Queensland doesn’t prove a person is a safe driver, it just proves that the person can beat the requirements by the state” - Instructor*

### ***Disparity between insights and other findings***

While some instructors and the drivers generally advocated more defensive driving skills, others believed defensive driving courses could be a dangerous idea. For instance, defensive driving has been discussed as a cause of risky driving, particularly in young men, as they are provided with a false sense of security, leading to overconfidence while driving. Furthermore, when considering younger drivers limited incomes, instructors also suggest that defensive driving courses can be too much to ask of new drivers (i.e. L plate holders), as they may not be able to afford them.

*“You’re trying to teach them defensive driving practices anyway, I personally think that’s enough.” - Instructor*

*“I used to run a course like that [for learners], but I could never get anyone to come and do a course that involved that sort of stuff.” - Instructor*

Instructors generally believed that young/inexperienced drivers are more prone to break driving laws or leave struck animals unaided by the roadside. Similarly, instructors indicated that in order for a person to be a safe and effective driver around wildlife, their education must begin as early as possible by incorporating driving instruction and road rules in school curriculums. Specific to young drivers and their peers, driving simulators (e.g., Virtual Reality programs) were suggested to introduce driver-animal collisions to new drivers in a non-burdening way.

*“The first thing they want to do is speed up.” - Instructor*

*“Should add a driving program in senior curriculum” - Driver*

*“They’re probably still just young and dumb, and you can’t tell people these days what to do. They don’t care.” - Instructor*

*“Maybe a simulator? Could improve the discussion among school teens.” - Driver*

Similarly, instructors understood that they have likely been hired to instruct new young drivers, primarily to increase log-book hours rather than to become more competent drivers. Partnerships with parents was suggested, so that young drivers can continue to receive driving instruction in line with professional advice, if they decide to discontinue lessons.

*“I was taught by my mum, didn’t need an instructor” - Driver*

*“Need to encourage parents to work with a driving school.” - Instructor*

Some scepticism was identified regarding the logbook requirements for learner drivers to achieve their P plate. Whilst some agreed that this is a greater requirement than past years and that this

encourages more time learning on the road than before, others disputed that 100 hours may not be enough to showcase adequate driving capabilities. Moreover, instructors identified that the quality of hours is more important than the quantity, and that potentially longer drives to contribute to the 100-hour requirement is substantially better than small 15-20-minute short drives. The issue is then presented that drivers when learning to drive should be advised to commit to longer sessions of driving either with parents or formal instructors, and that a reliance on short trips for the sole purpose of reaching logbook requirements will leave drivers unprepared when unsupervised.

*“in my experience, instructors just train you to pass the test.” - Driver*

*“the less experience you’ve got as a driver, your reaction times will be slower.” - Instructor*

*“As an instructor I can tell when a student gets to the end of their hours, and they have actually done those hours.” - Instructor*

More specific to nocturnal (e.g., bats, possums) and crepuscular animals (e.g., koalas, kangaroos), artificial lighting was introduced as a difficult solution to balance for preventing animal strikes. On the one hand, greater lighting would possibly assist animal awareness while driving, giving drivers more information to work with when on the roads at night. On the other hand, high levels of artificial lighting can disturb local wildlife, and actually harm their movement, foraging and other survival behaviours in the long-term (Beier, 2006). Night driving was already positioned as a contentious issue from the interviews, as night driving and night-time driving instruction was not provided.

*“Well we live in a rural area, so the roads are kind of long. I wouldn’t add more lights because that could disturb animals at night in bush areas” - Driver*

# Conclusion

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This report summarises the activities undertaken by Social Marketing @ Griffith to understand drivers, driving instructors, and expert stakeholders' perceptions regarding animal awareness, and how awareness of wildlife while driving can be improved for new and upcoming drivers.

The key activity in understanding drivers, instructors and expert stakeholders' insights towards awareness of wildlife while driving was depth interviews with members of each of these broad groups living in RCC areas. These interviews probed participants' prior understanding of driving around wildlife and wildlife populated areas, contrasted personal experience with formal instruction processes, and suggested new or better ways to provide driving instruction to prevent vehicle strikes on wildlife in the RCC area.

The data collected has identified a number of areas for consideration. A series of conclusions are summarised below, followed by recommendations for RCC consideration:

- Typical driving instruction was highlighted as insufficient for educating new drivers on animal awareness & avoidance strategies. This sentiment was shared across drivers, instructors and expert stakeholders.
- Participants believed that harming wildlife while driving is largely due to young, inexperienced drivers, related somewhat to limited interaction with formal driving instructors.
- Driving instruction is considered a pathway to completing logbook requirements, rather than to enhance driving skills.
- Night driving is not taught, due to conflicts in schedules and/or preference between drivers and instructors.
- More actors in the broader system of driving instruction and adequate driving practice need to be involved in the instruction process (e.g., parents, extra-curricular trainers, schools).
- Overall drivers are considered 'price sensitive' when it comes to choosing more driving instruction to supplement learning.
- General disparity was perceived between the requirements for acquiring a valid drivers license, and the extent that new drivers need to engage in formal driving instruction to be competent and safe drivers around wildlife.



## Recommendations

Based on the above conclusions, a set of recommendations for RCC consideration are as follows;

- 63% of survey participants indicated no formal training regarding wildlife awareness while driving. Formal education of animal awareness and safe driving practices around wildlife/wildlife populated areas must be introduced into driving instruction in the RCC area, potentially as a requirement of undertaking instruction with a licensed instructor(s).
- New drivers require night driving as a formal instrument to becoming competent drivers. Incentivising instructors to provide specialty services for driving at night is highly recommended.
- Services for instructors to 'Train the Parent' should be developed to entrench high quality driving instruction deeper into communities, and to extend the time that new drivers engage with industry standard driving instruction. This 'learning by teaching' approach' could also improve instructors pre-existing service provision.
- School-based learning could be introduced to schools that either do not invest in road-safety and awareness education, or which do not currently discuss animal awareness while driving and safe driving around wildlife.
- Minimum duration drives are recommended for L plate holders. This would ensure new drivers spend longer periods of time behind the wheel, placing emphasis on quality and not quantity.
- External incentivisation (e.g., monetary assistance) could be used to persuade young drivers on their L plates to continue using formal instruction beyond its use for increasing logbook hours.

## References

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- Beier, P. (2006). Effects of artificial night lighting on terrestrial mammals. In *Ecological consequences of artificial night lighting* (C. Rich and T. Longcore, eds.). Island Press, Washington, DC (pp. 19-42).
- Brewerton, P. M., & Millward, L. J. (2001). *Organizational research methods: A guide for students and researchers*: Sage.
- Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annu. Rev. Psychol.*, 55, 591-621.
- Dietrich, T., Rundle-Thiele, S., Schuster, L., & Connor, J. P. (2016). Co-designing social marketing programs. *Journal of Social Marketing*, 6(1), 41-61. doi:10.1108/Jsocm-01-2015-0004
- Pang, B., Rundle-Thiele, S., & Kubacki, K. (2018). Can the theory of planned behaviour explain walking to and from school among Australian children? A social marketing formative research study. *International Journal of Nonprofit and Voluntary Sector Marketing*, 23(2), e1599. doi:10.1002/nvsm.1599
- Rundle-Thiele, S., Russell-Bennett, R., Leo, C., & Dietrich, T. (2013). Moderating teen drinking: combining social marketing and education. *Health Education*, 113(5), 392-406.
- Teel, T. L., & Manfredo, M. J. (2010). Understanding the diversity of public interests in wildlife conservation. *Conservation Biology*, 24(1), 128-139.
- Yin, R. (2015). *Qualitative Research from start to finish* (2nd ed.). New York, NY: The Guildford Press, Guildford Publications Inc.
- Yin, R. (2017). *Case study research and applications: Design and methods*: Sage publications.

# Authors

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**Mr. James Durl** is a PhD candidate and Research Fellow at Social Marketing @ Griffith. Broadly, his research areas focus on service design, social marketing and adolescent consumers, with particular interest in engaging consumers through gamification and fun. He has an emerging cross-disciplinary publication record and has demonstrated a keen ability to communicate his research at a multi-national level. James' recent projects have focussed on delivering scalable interventions that address issues relating to alcohol consumption (i.e., reducing binge drinking and increasing negative perceptions of drinking) and exploring how to retain female STEM2D undergraduates in university degrees.

**Professor Sharyn Rundle-Thiele** is a social marketer and behavioural scientist. She is the Founding Director of Social Marketing @ Griffith, which is the largest university-based group of social marketers in the world. She is Founding Co-Editor of the Journal of Social Marketing, one of the worlds' leading behaviour change journals. She has led projects that have changed behaviours for 10,000's of people in areas including health, the environment and for complex social issues. Sharyn has led programs that have increased healthy eating, changed adolescent attitudes to alcohol drinking, reduced food waste, increased dog's abilities to avoid koalas, and many more. She has published more than 175 books, book chapters and journal papers. Awards and appointments including The Philip Kotler Social Marketing Distinguished Service Award, Australian New Zealand Marketing Academy Fellow acknowledge her innovative, high-quality practice and science and her leadership. She has attracted more than \$12 million in funding for projects. Her work spans across design, implementation and evaluation of behavioural change programs.

**Dr. Patricia David** is a Research Fellow at Social Marketing @ Griffith. Her research interests are motivated by understanding what drives behavioural change. Patricia's PhD involved advancing the Social Marketing field by taking the first steps toward the development of a Theory of Behaviour Change. Patricia's work is award winning. Her behaviour change research has won a commendation award in the ESMC conference in 2018 and the Doctoral Colloquium Contribution to Theory & Knowledge Award in the ANZMAC conference in 2016. Patricia has continuously led teams in research projects, working with both quantitative and qualitative approaches, and her current work focuses on the design, implementation and evaluation of campaigns and community behaviour change programs across a broad range of social issues, with a special focus on environmental and conservation contexts.

**Dr. Bo Pang** is a Research Fellow in the Social Marketing @ Griffith Centre at Griffith University. Bo holds a PhD in Marketing and offers extensive experience in conducting research and delivering programs in the field of marketing theory and social marketing, all of which are published in leading scholarly journals. Bo's work involves implementing theoretical constructs into empirical marketing campaigns and he offers experience delivering changes benefitting community across a diverse range of projects at Local, State and National governments. Bo has also actively involved in industrial engagement, working with a wide array of profit and not for profit organizations.

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# Appendix 1. Marketing collateral

## 1. Social Marketing @ Griffith Facebook post

**Social Marketing at Griffith**  
14 April · 🌐

Please take our short 10-minute survey about driving in Queensland for your chance to win up to \$100 in prizes.  
Take the survey here ➡ [https://bit.ly/DriverSurvey\\_Griffith](https://bit.ly/DriverSurvey_Griffith)

#drive #vehicle #motors #drivertraining #roadsafety  
#driving #drivingtest #drivingschool #roadtrip #learntodrive  
#drivesafe

**Can you help us?**

**Driving training survey**

griffith.edu.au/sm@g

**Griffith UNIVERSITY**  
Social Marketing @ Griffith

## 2. Leavelt newsletter spot

### Try to win \$50 by supporting Griffith University research

The [Social Marketing @ Griffith](#) team want to know more about driver wildlife awareness training. This research project includes [surveys](#) and interviews. People assisting the interviews directly qualify for a Coles Myer voucher and every completed survey has a chance to win a \$50 Coles Myer voucher.

Thanks for reading our e-[newsletter](#).

The Leave It team  
Jess, Sharyn, Patricia and Bo



# Appendix 2. Questionnaire

## Wildlife awareness while driving survey

Welcome!

Social Marketing @ Griffith are conducting this research to understand more about driver training. This survey will take you no longer than 10 minutes.

If you are under 18 you should let your parents/guardians know before you take part in this survey study. More information about our survey can be found in this information sheet.

Thank you for supporting our research!

### Characteristics

1. Please tick any of the following that apply. What type of license do you currently hold? **[license1]**

L plates	
P1	
P2	
Open drivers' licence	
I don't currently hold a valid driver's license	

2. Did you receive your licence/driving instructions in the Redland City Council area? **[license2]**

Yes/no

3. How old were you when you received your learners license?

**[license3]**

\_\_\_\_\_

4. How old were you when you first achieved your current license type?

**[license4]**

\_\_\_\_\_

5. Please tick any of the following that apply. Whom taught you how to drive?

**[driving1]**

Parents	
Siblings	

Friend/friend of family	
Formal instructor/paid instructor	
Other	

6. Please provide the name of the driving instructors trading name/organisation that you used to learn how to drive (If unable to recall the name, please state 'n/a' or 'cannot remember')

[driving1a]

\_\_\_\_\_

7. When learning to drive, were you given any teaching or instruction regarding wildlife awareness, or safe driving practice around wildlife?

[driving2]

Yes/no

8. Please indicate your agreement/disagreement with the following statements:

[driving3]

	-3 Strongly disagree							3 strongly agree
Driving at night is more dangerous when it comes to wildlife.								
Native wildlife such as koalas and wallabies are more active by roads at night.								
Drivers should slow down when wildlife is most active.								
Drivers can be taught skills to save wildlife while driving.								
Drivers can be taught skills to avoid harming wildlife when driving.								
Drivers can be taught skills to avoid harming themselves or passengers while driving.								

9. From the following list, indicate what should be done to avoid harm to native wildlife or humans when encountering native wildlife on the road while driving

[driving4]

Flash your lights	
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Honk your horn	
Swerving	
Slow down	
Hit brakes	
Be aware of the area being driven in	
Pay attention to wildlife signs	
Other:	

10. From the following list, indicate what should be done to avoid harm to native wildlife or humans when encountering native wildlife on the road while driving

[driving5]

Real time GPS monitoring system	
Collision avoidance system	
Animal warning system	
Other:	

11. Are you also a licensed driving instructor/provide driving instruction in Queensland as a source of income?

[instructor1]

Yes/No

12. What is the name under which you/your organisation operates when providing driving instruction?

[instructor2]

13. While providing driving instruction to clients, how often do you provide training regarding wildlife encounters on the roads?

[instructor3]

Never	
Very Rarely	
Rarely	
Occasionally	

Very frequently	
Always	

14. How often do clients request information or strategies surrounding driving when encountering wildlife on the roads?

[instructor4]

Never	
Very Rarely	
Rarely	
Occasionally	
Very frequently	
Always	

### Driving perceptions

1. How often did you see native wildlife on the roadside while driving in the last month?

[wildlife1]

Koalas	
Kangaroos/Wallabies	
Brumbies	
Wombat	
Emus	
Camels	
Other	

2. How often did you see native wildlife crossing roads while driving in the last month?

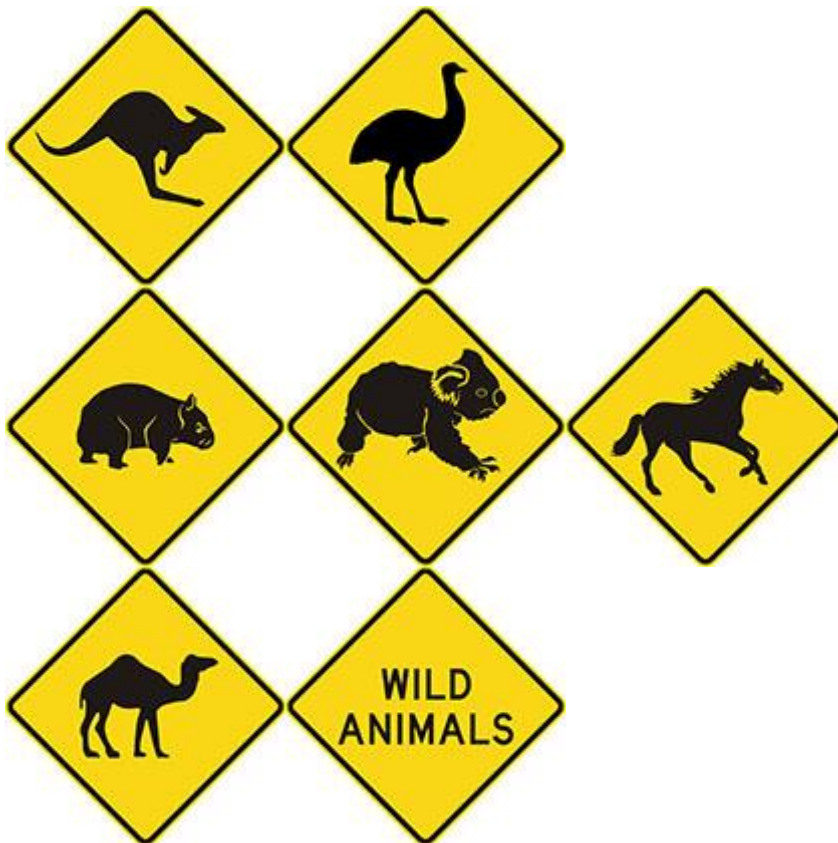
[wildlife2]

Koalas	
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Kangaroos/Wallabies	
Brumbies	
Wombat	
Emus	
Camels	
Other	

3. Which of the following road signs have you seen while driving in the last month? (Check all that apply).

[wildlife3]



4. Please rate your agreement with the following statements:

[wildlife4]

	-3 Strongly disagree						3 strongly agree
Humans should manage wildlife populations so that humans benefit.							
The needs of humans should take priority over wildlife protection.							
Wildlife are on earth primarily for people to use.							
We should strive for a world where there is an abundance of wildlife for hunting.							
Hunting is cruel and inhumane to the animals.							
Hunting does not respect the lives of animals.							
People who want to hunt should be provided the opportunity to do so.							
We should strive for a world where humans and wildlife can live side by side without fear.							
I view all living things as part of one big family.							
Animals should have rights similar to the rights of humans.							
Wildlife are like my family and I want to protect them.							
I care about animals as much as I do other people.							
I feel a strong emotional bond with animals.							
I value the sense of companionship I receive from animals.							

5. How often do you slow down at wildlife warning road signs? [Please tick just one option]

[warnings]

Never	
Very Rarely	

Rarely	
Occasionally	
Very frequently	
Always	

6. For me, slowing down at wildlife warning road signs is:

[attitudes]

Harmful -3						Beneficial 3	[at1]
Bad -3						Good 3	[at2]
Worthless -3						Valuable 3	[at3]
Boring -3						Exciting 3	[at4]
Unpleasant -3						Pleasant 3	[at5]
Unenjoyable -3						Enjoyable 3	[at6]

7. Please rate your agreement with the following statements:

[socialnorms]

	-3 Strongly disagree						3 Strongly agree
Ignoring wildlife warning road signs will cause wildlife fatalities							
Wildlife warning road signs will reduce wildlife road kills							

Many people in my neighbourhood slow down at wildlife warning road signs							
People in my neighbourhood think I should slow down at wildlife warning road signs							
I will slow down at a wildlife warning road sign							
It is important to keep wildlife safe							
Slowing down at a wildlife warning road sign will keep wildlife safe							
Slowing down at a wildlife warning road sign is inconvenient							
Slowing down at a wildlife warning road sign will keep the roads safe							
Slowing down at a wildlife road sign will increase my travel time							

8. Please rank the following in order of your **most to least** preferred methods for receiving driving instruction regarding wildlife awareness (click and drag)

*[preferences]*

As part of regular expert driving instruction	Most
From parents, friends or relatives	
Virtual Reality driving simulator	
Online game/driving simulation	
Group seminars/workshops for conservations and wildlife safety in general	
Wildlife awareness driving course	Least

### Demographics

1. What is your gender?
  - a. Male
  - b. Female
  - c. Other
  
2. What is your current age in years? \_\_\_\_\_
  
3. What is your level of education?

School Education level	
Certificate level	
Advanced Diploma and Diploma	
Bachelor's Degree	
Graduate Diploma and Graduate Certificate	
Postgraduate Degree	

4. What is your postcode? \_\_\_\_\_
5. Do you want to enter the draw to win a \$Coles/Myer gift card? If yes, you will be prompted to enter your preferred email address. This address will be kept private from third parties, and used only for the purposes of the draw.  
 Yes/no
  
6. At the end of this research, would you want a summary of research results? If yes, you will be prompted to enter your preferred email address. This address will be kept private from third parties and used only to share research results.  
 Yes/no
  
7. What is your email address?  
 \_\_\_\_\_
  
8. Do you want to help the next stage of our research project? If yes you will be prompted for your preferred contact method. We are offering a \$50 Coles/Myer gift card for no more than one hour of your time. If provided, your contact details will be used only for the research interview, and your information will not be shared with external third parties.  
 Yes/no
  
9. What are your preferred contact details? Please list an appropriate account or phone number to be contacted by.

Zoom	
Discord	

Microsoft Teams	
Skype	
Phone	
Other	

Thank you for completing our survey. Please contact [j.durl@griffith.edu.au](mailto:j.durl@griffith.edu.au) if you have any questions. The draw for those who entered to win a \$50 Coles gift card will be determined on the 1st of May, 2020. Thank you again for supporting our research!



## Appendix 3. Interview guide (driver)

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Social Marketing @ Griffith

### **Interview Discussion Guide** **Train the driver, phase 2**

**Background information to our project:**

*Redlands City is a prosperous and thriving area, with unique interactions between the community, its wildlife and the environment. Redlands City Council recognises the need to protect wildlife and allow native species to flourish, while also supporting local business to provide valuable services and be profitable. Incidents of animal fatalities, as well as damage to people and property on roads is a pervasive issue across Australia. This project will test if the provision of increased education and awareness training for new drivers regarding the presence of wildlife on roads while driving reduces incidents of wildlife vehicle-strike in the Redlands?*

**Specific aim:**

*The purpose of this interview is to derive insights into required wildlife awareness practice, and to inform further action to improve driver safety and wildlife awareness.*

<b>PART I: Introduction – 5 minutes</b>			
<b>Interview Questions</b>	<b>During the interviews take note of:</b>	<b>Probe for</b>	<b>Explanations and justifications</b>
<p><b>- Introduction to the team, the project and interview overview</b></p> <p><i>Researchers at Social Marketing @ Griffith. Working across a range of social and environmental projects benefitting societies and communities.</i></p> <p><i>Thank you for agreeing to talk to me/us. We really appreciate your time. This is an informal conversation about your experiences and views. This shouldn't take more than 30-60 minutes.</i></p> <p><i>We are here to try and gain insights into experiences with driving instruction, whether by formal instructors or informally through family/friends, regarding wildlife driver awareness. We're doing this by talking to a range of different stakeholders. Insights will inform best practice in ensuring drivers and wildlife coexist without causing disadvantage to either group.</i></p> <p><b>- Information sheet and consent:</b></p> <p><i>Read information sheet briefly with them so that they are informed, double check consent to continue, move forwards.</i></p> <ul style="list-style-type: none"> <li>• Do you have any questions regarding the information sheet?</li> <li>• Are you happy to give verbal consent to participate in this conversation?</li> </ul>	-	-	Ensure participant is informed, relaxed and have had all their questions answered.

<p><b>- Questions before we begin</b></p> <ul style="list-style-type: none"> <li>• Do you have any questions before we begin?</li> </ul>			
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Part II: main interview: 5-10 minutes			
Interview Questions	During the interviews take note of:	Probe for	Explanations and justifications
<p>1. <i>I have a few sample scenarios where road incidents could arise between wildlife on and around roads, and drivers needing to react to these scenarios. I'd like us to go through each scenario and, one by one, I want you to walk me through what you think should be done in each scenario.</i></p> <ul style="list-style-type: none"> <li>• <i>e.g., many species of native lizards and snakes are becoming endangered and are listed as protected. However, drivers obviously don't want to cause injury to themselves, others or damage to their cars when avoiding lizards and snakes on roads. What should be done when a lizard runs out in front of a driver? What can be done to make reacting easier?</i></li> </ul>	<p><i>Particular points to elaborate further on</i></p>	<p><i>Use the same wording and language as the expert stakeholder</i></p> <p><i>Ensure questions have been answered sufficiently</i></p>	<p>Minimum of guidance and intervening.</p> <p>Be comfortable with pauses and small breaks.</p> <p>Current initiatives/new initiatives</p>

<ul style="list-style-type: none"> <li>e.g., koalas and wallabies are most active at dusk and dawn and hang around roadsides to find grazing that has had water run-off from roads. This means a) heavy and/or large animals on roadside, b) low visibility for drivers, not factoring the behaviour of kangaroos and wallabies by roads. What should be done?</li> </ul> <p>USE THESE QUESTIONS AFTER EACH SCENARIO</p> <p>Pending answer from participant</p> <p><b>How did you learn</b> this was what you should do?</p> <p><i>Do you think that this solution would work in different scenarios? In other words, can you think of scenarios where this advice would not be suitable?</i></p> <p>Follow-up for instructors/those who have taught</p> <p><b>What do you tell your students to do?</b></p> <p>Regarding instruction received, regardless of person</p> <p>3. Now I don't want to make you uncomfortable but I'm going to ask you a question about road accidents. If the conversation somehow ventures to a territory that makes you uncomfortable, all you have to do is let me know, and we can change course. But what I want to ask is, <b>have you ever witnessed or personally experienced a</b></p>		<p><i>Elaborate on something interesting he/she have mentioned</i></p> <p><i>Contrast opinion with different perspective (e.g., take role of instructor when speaking to new drivers)</i></p>	<p>Obtaining a sense of their perception: positive/negative</p> <p>Interested/neutral/disinterested</p>
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<p><b>road accident involving wildlife?</b> Does not have to be within RCC area. If so, can we get some very brief summary details of what happened?</p> <p><u>If the driver hit an animal or was in car when hitting animal</u></p> <p>Are you able to share <b>what steps were taken to try and avoid the collision, and to what extent you think it worked/avoided damage? Essentially could it have been worse? Can you think of a better way to approach this exact situation if the experience were repeated?</b></p> <p><u>If saw the driver hit an animal from outside the vehicle</u></p> <p>Were you able to see what the driver did to avoid or prevent damage? <b>Thinking back, was there a more suitable approach that should have been taken in hindsight?</b></p>			
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<b>Part III: Closing questions – 10-15 minutes</b>			
<b>Interview Questions</b>			

<p>1. If you think back to your own experience with driving instruction and driving around animals, what do you know about now, that you didn't or couldn't have thought to ask back then?</p> <p>2. Is there anything that you think driving instructors should be doing as part of improving driver wildlife awareness?</p> <p style="padding-left: 40px;">If nothing; ask about moose testing and defence courses, extra-curricular and non-instructor provided courses</p> <p style="padding-left: 40px;">Have you ever taught someone else to drive? Do you think you are giving something that others aren't getting?</p> <p>3. What about the larger system; going beyond drivers and instructors and assuming its all up to them, who else is involved in ensuring road accidents with wildlife don't happen?</p> <p><b><i>If participant struggles to answer this, can use an example.</i></b></p> <p><b><i>e.g., Teenage binge drinking = bad, but there is more than teens and alco. Companies. There are parents trying to prevent or endorse, retailers wishing to sell but not to minors, teachers and school staff tasked with avoiding, policy makers who make tax from Sales etc.</i></b></p>	<p><i>Points to elaborate further on</i></p> <p><i>Emotional balance/passionate answers</i></p> <p><i>Leanings and opinions regarding actors in the system</i></p>	<p><i>Use the same wording and language as the expert stakeholder</i></p> <p><i>Ensure questions have been answered sufficiently</i></p> <p><i>Elaborate on something interesting he/she have mentioned</i></p> <p><i>Contrast opinion with different perspective (e.g., take role of instructor when speaking to new drivers)</i></p>	<p><b>Best practice regarding driving around wildlife</b></p> <p><b>Optimal experience with driving instructors</b></p>
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4. What can these other actors do? What should they be doing, what don't they do enough of, what should they <i>stop</i> doing?			
<b>Part IV: End session and thank you - 5 minutes</b>			
<b>Interview Questions</b>	<b>During the interviews take note of:</b>	<b>Probe for</b>	<b>Explanations and justifications</b>
<ul style="list-style-type: none"> <li>• Thank you for your time and contribution</li> </ul> <p><i>We really appreciate you taking the time to talk to. This has been very insightful. I'm looking forward to bringing your key points back to the team.</i></p> <p><b>Questions before ending</b></p> <ul style="list-style-type: none"> <li>• Do you have any questions for me?</li> </ul> <p><i>If anything comes up, you have my email. It is also on the information sheet.</i></p> <p><b>Issue incentive</b></p> <p><i>As a thank you for your time, we have a \$50 Coles/MYER eGift voucher for you. Would the email you provided earlier be the best way to send this to you?</i></p> <p><i>If not:</i></p> <ul style="list-style-type: none"> <li>• What is your mailing address?</li> </ul> <p><b>Re-contact</b></p>	The mailing address to send the incentive		<p>Ensure all questions have been answered.</p> <p>They have contact information (emails)</p>

<ul style="list-style-type: none"><li>• Would you be interested to be re-contacted at a later stage in the project if needed?</li></ul> <p><b><i>Confirm contact details (i.e., email address)</i></b></p>			
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Lifeline contact details

13 11 14