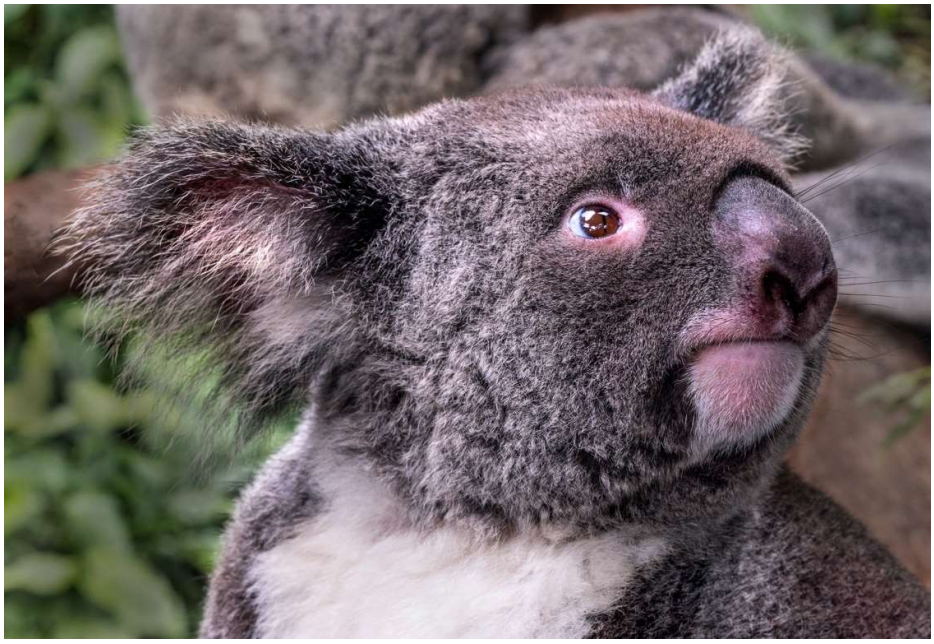
Griffith UNIVERSITY
Queensland, Australia
Social Marketing @ Griffith

Redland CITY COUNCIL

Koala Awareness and VMS Campaign Evaluation 2021/2022



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Introduction

The aim of this study was to evaluate the effectiveness of two interventions that were conducted in the Redlands Coast region between 1 July 2021 and 30 June 2022 namely the Koala Awareness Campaign, and the flashing Variable Message Signs (VMS) installed on selected roads across four Redland City Council Koala Safe Neighbourhoods.

The Koala Awareness Campaign has run a series of focussed advertisements for a fourth consecutive year. The 2021/22 campaign aimed to continue to increase residents' awareness, attitudes, and knowledge of koalas in the community. The campaign was implemented in the Redland City Council community during the breeding season (25 September 2021 through to 31 December 2021). The primary focus for the 2021/22 Koala Awareness Campaign was to target the wider Redland Coast community, young people (through digital channels) and internal and external stakeholders.

In addition to the Koala Awareness Campaign, community feedback on the flashing VMS signs installed in the Ormiston, Birkdale, and Thornlands areas were examined in the 2021/22 evaluation. VMS signs aim to remind residents to be remain vigilant on the road to avoid koala strikes.

Evaluation in the previous years included both pre/post face to face intercept surveys (2018, 2019 and 2020) and online and mail out surveys for the 2020/2021 campaign evaluation.

To assess program effectiveness surveys were conducted before and after delivery of VMS installations and the Koala Awareness Campaigns (September 2021 to April 2022). All data for this evaluation period was collected online.

The 2021/22 outcome evaluation aimed to understand whether the Koala Awareness Campaign and VMS initiatives are effective in isolation and when acting together.

Specifically, the aims of the evaluation are to:

- Assess the effectiveness of the Koala Awareness Campaign 2021/22 to improve residents' attitudes, awareness, and knowledge towards koalas in their community.
- Measure the effectiveness of VMS for drivers to slow down in koala conservation areas.
- Measure the effectiveness of the koala citizen science initiative- Redlands Coast Koala Watch.
- Examine how response to koala conservation initiatives improves when residents are exposed and participate within multiple initiatives.

21/22 Koala Awareness Campaign and VMS

A comprehensive communication campaign was implemented across the Redland City Council area from 25 September to 31 December 2021 to coincide with the peak koala movement season. The campaign featured billboard signage at Ormiston and Capalaba Central, newspaper advertising (Redland City Bulletin), radio advertising (Bay FM), shopping centre displays, bus sides (Go Transit), signage (bus shelters, local parks and reserves, banners on Council fencing at IndigiScapes), social and digital advertising (Facebook, Instagram, Snapchat and Google Ads), 14 organic social media posts (IndigiScapes Facebook page), newsletters (Koala Safe Neighbourhoods, Councillor newsletter to residents, Redlands Coast Koala Watch and IndigiScapes), magazines (Our Redlands Coast), posters and flyers (Council customer service centre and libraries), media release, website and internal communications to all Redland City Council staff.

Objective

To increase awareness about koala breeding season and encourage residents to be vigilant and take appropriate action where possible.

Key messages

Farmer wants a wife – main roads collateral

Right now he could not only be looking for a wife, he could be looking for a new tree, or she could be looking for him. Either way, koalas are on the move. Look out for them on the road or moving through your yard. Drive safely, keep a koala friendly backyard with pool and fence escapes and keep pets secure. By doing those simple things we can all live happily ever after.

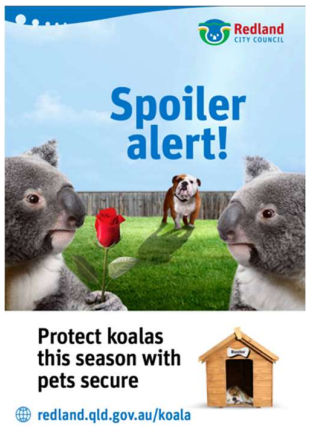
General

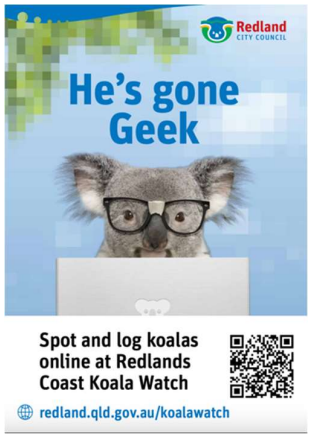
- We share our naturally wonderful Redlands Coast with koalas, so we need to watch out for them.
- Koalas are more active during breeding season from August to December and will be moving around looking for love.
- Koalas are mostly active at night but they will move around during the day if they are disturbed, if they are too hot, too cold or simply to find a new feed tree.
- Koalas will use a variety of trees in their travels, not all eucalypts or native. These trees provide rest stops and safe havens, they are important stepping stones in their passage across the urban environment.
- You can help our local koalas by:
  - slowing down and keeping an eye out when driving, particularly at night
  - making your backyard koala friendly by planting trees and putting wildlife escapes on your fence and in your pool
  - ensuring your pet is secured at night and when out walking

- keeping your distance and letting them move about freely if they are not in immediate danger
- calling the Redland City Council Wildlife Rescue Service immediately on 07 3833 4031 if you notice an ill or injured koala

- Submitting all koala sightings to Redlands Coast Koala Watch, you can join at www.redland.qld.gov.au/koalawatch .
  - To find out more about our urban koalas and what we are doing to help, visit www.redland.qld.gov.au/koala

The success of the past - The Bachelor campaign theme was built upon during the 2021/22 koala movement season. The 2021/22 campaign included Farmer wants a wife (Koala wants a wife) and Beauty and the Geek (He's gone geek). This campaign featured six key collateral images, with five addressing major threats (roads, pets, pools, fences, and a new one for illness) and an additional collateral encouraging koala sighting submissions (Redlands Coast Koala Watch).





VMS (variable message signs) have been used in the past demonstrating their capacity to get Redlands Coast residents and other drivers to slow down. Within Redlands Coast there are key koala areas called Koala Safe Neighbourhoods. During the 2021/2022 campaign period, VMS were continued across three of the neighbourhoods: Ormiston, Birkdale, and Thornlands.

During this period there were 10 signs that were visible across these suburbs:

- Ormiston
  - Starkey Street (n = 2)
  - Sturgeon Street (n = 2)
  - Wellington Street (n = 2)
- Birkdale
  - Old Cleveland Rd East (n = 2)
- Thornlands
  - Fitzroy Street (n = 2)

Method

Pre and post campaign surveys were administered to evaluate the effectiveness of the initiatives implemented. The questionnaires focused on demographic and geographic characteristics, perceptions, and behavioural questions regarding conservation actions. Incentives were offered in the pre and post survey, where participants could opt to go in the draw to win one of five $100 Coles/Myer gift cards.

The pre survey was conducted from September 2021 - November 2021 and was promoted through several online channels.

- 4-week paid Facebook ad (reached 24,303 residents)
- Redland City Council's social media channels
  4 Redland community Facebook groups
- Mailing list (n=593)

The follow-up survey was conducted from March – May 2022. It was also promoted via several online and offline channels.

- 2-week paid Facebook ad (reached 16,835 residents)
- Redland City Council's social media channels
  6 Redland community Facebook groups
- Mailing list (n=89)
- Flyer mailout in Birkdale, Ormiston and Thornlands (n=2,000)
- Flyer drops at 14 local businesses (vets, taverns, medical centres and Redland City Council libraries and service centres)

Pre and post data collections varied in terms of channels in order to minimise the survey fatigue in the community. Samples from the pre and post data collections show no significant differences in terms of their demographic and geographic. The pre-questionnaire included questions to assess koala awareness, knowledge of koala fatality, perceived ability to protect kolas, and conservation actions participated in (see pre survey). The post questionnaire captured major koala awareness metrics as did the pre survey with some of questions re-worded to ensure better validity and reliability. To measure the effectiveness of the campaign, recall questions were also added to the follow up questionnaire, including unaided and aided recall of campaigns, recall of communication channels and the content of the advertisements. Redland City Council has run a series of koala conservation initiatives during the last four years, and to capture the impact of that, additional questions were used to identify current and future intentions to act on koala conservation behaviours (see post survey).

Once data collection was completed, all data from the online and paper surveys was collated and inputted into SPSS software. Data was cleaned prior to analysis, and coding was undertaken to identify themes for open ended questions. Additionally, data analysis was performed using descriptive statistics and t-tests were used to assess whether there were any statistically significant group comparisons.

Demographics

In the pre survey there were 538 surveys collected from Redlands Coast residents. Over half of respondents were aged 55 and above, see Figure 1 for full breakdown. Respondents were from all regions of the Redland area with high responses from Ormiston and Wellington Point (21.9%), Thornlands (18.4%), and Cleveland (16.2%).

In total, 316 post surveys were collected from Redlands Coast residents. A bit over a quarter (29%) of respondents are the age 65 and older. Figure 2 illustrates a full breakdown of age in the post survey. Responses came from the entire Redlands Coast region with higher response rates from Raby Bay (21.5%), Ormiston and Wellington Point (19%), and Cleveland (17.1%). No significant differences on the demographic characteristics of the respondents between pre and post surveys. See Table 1 for more details.

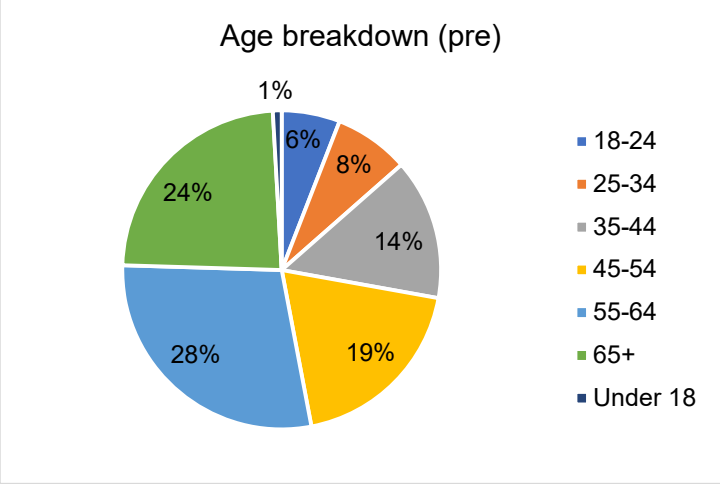


Figure 1 Age breakdown (pre)

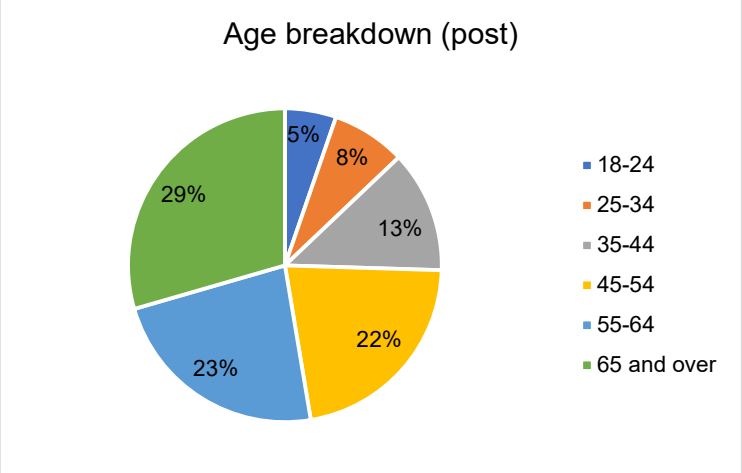


Figure 2 Age breakdown (post)

Table 1 Respondents' postcode

Postcode	Suburb(s)	Pre (n=538)	Post (n=316)
4157	Capalaba, Sheldon	57	31
4158	Thorneside	13	6
4159	Birkdale	53	12
4160	Ormiston, Wellington Point	118	60
4161	Alexandra Hills	36	22
4163	Cleveland	87	54
4164	Raby Bay	42	68
4165	Thornlands	99	39
4183	Mount Cotton, Point Talburpin, Redland Bay, Victoria Point	18	6
4184	Bay Islands (Karragarra Lamb, Macleay Russell Coochiemudlo)	15	12

Koala Awareness Campaign Recall

An unaided recall question started the campaign recall section of the post survey. Participants were asked if they recalled initiatives run by Redland City Council and to describe the messages or images they remembered. Analysis revealed for the unaided recall 35.1% of respondents when asked, could recall a Redland City Council koala conservation initiative.

Thematic analysis indicated that there were four key categories; campaign related (n=40), roadway related (n=64), internet based (n=15), and organisation/group based (n=29). Most respondents remembered seeing signs indicating slower speeds in the area (n=19), wildlife crossing markings (n=14), breeding season (n=8), report koala sightings (n=7), keep pets away (n=7), and koala coast watch (n=6).

Respondents were then given a selection of key campaign messages in an aided recall question and were asked to select which ones they recalled seeing. More than half (68.4%) recall seeing one or more of the campaign messages, with the most recalled message overall being the ‘Koala wants a wife’ (see Figure 3 for further breakdown of the aided recall). The pool collateral was significantly recalled more by those aged 18-24 ($p < 0.05$) than those aged over 55.

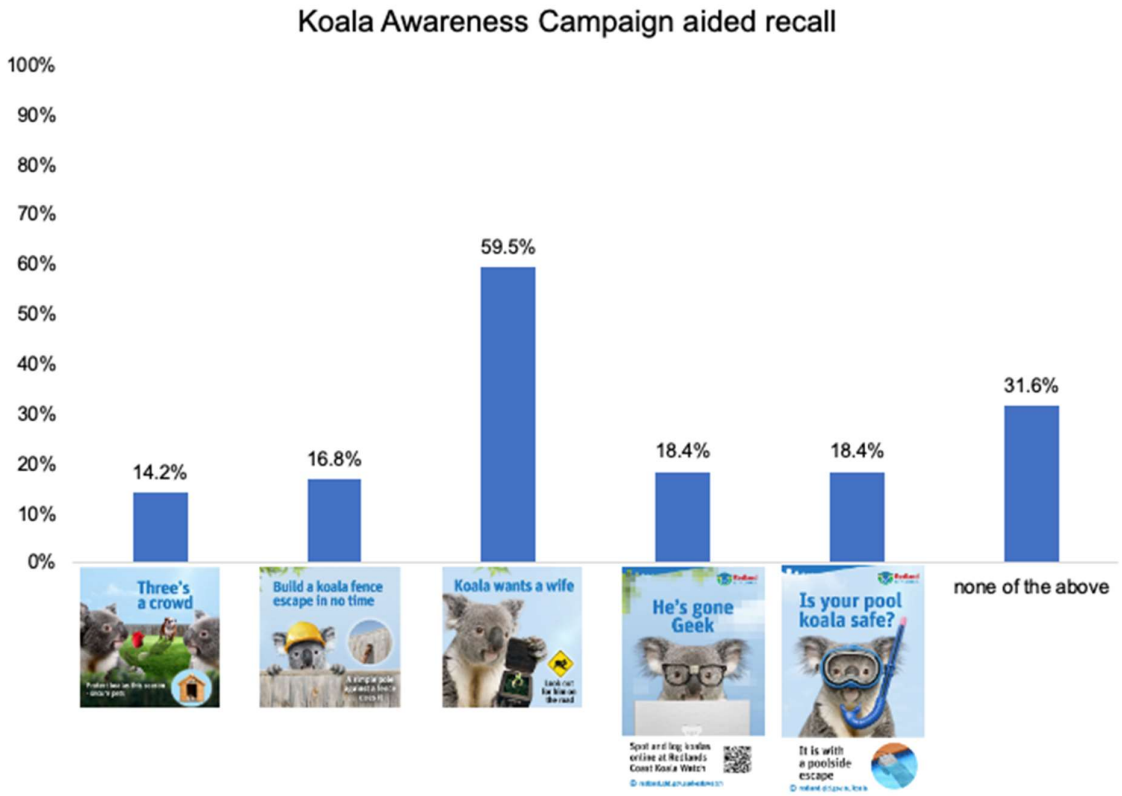


Figure 3 Koala Awareness Campaign aided recall

In terms of channels recalled by survey respondents, it was found that bus shelters (n=109) and billboards (n=108) and the side of the bus (n=48) were the most effective promotional channels. Instagram (n=1) and Snapchat (n=1) were recalled the least (see Table 2 for a full breakdown). It was found local newspapers (n=4), magazines (n=3), and roadside signs (n=3) were the top three responses for the “Other” category.

Respondents were then asked if the ads they saw prompted them to do anything with 28.2% of respondents saying yes. Adapting better caution on the road (n=28), having a higher awareness of koalas (n=26), and continuing with the things recommended (n=19) were the top three responses reported by respondents following exposure to koala awareness advertisements.

Table 2 Recalled media channels

Media Channels	n	%
Bus shelters	109	50.5
Billboards	108	50.0
On the side of a bus	48	22.2
Facebook	32	14.8
Other (e.g., newspapers, magazines)	32	14.8
Shopping centres	22	10.7
Radio	6	2.8
Ads in online news services	3	1.4
Pop up ads in phone apps or games	3	1.4
Instagram	1	0.5
Snapchat	1	0.5

Variable Message Sign Recall

Respondents were asked to indicate whether they noticed VMS (variable message signs) when driving through Ormiston, Thornlands, or Birkdale in the last 12 months, 75% of respondents recalled seeing the VMS signs which is an increase from 67.3% in early 2021, see Figure 4. Those aged 35-44 recalled seeing the VMS more than other age groups (84.2%) and those aged 18-34 recalled the VMS signs the least (59.1%), however these differences were not significantly different. For full breakdown of recall across age groups see Figure 5

The most recalled suburb was Ormiston with 45% of respondents seeing VMS there and then Thornlands (29%) and Birkdale (26%), see Figure 6. Ormiston is likely the most recalled suburb given that there were six visible signs across the suburb compared to the two in Birkdale and Thornlands. Those who saw VMS stated that slow down signs (n=50), koala faces on signs (n=37), and flashing signs with speed (n=30) were the top reported messages residents remember seeing.

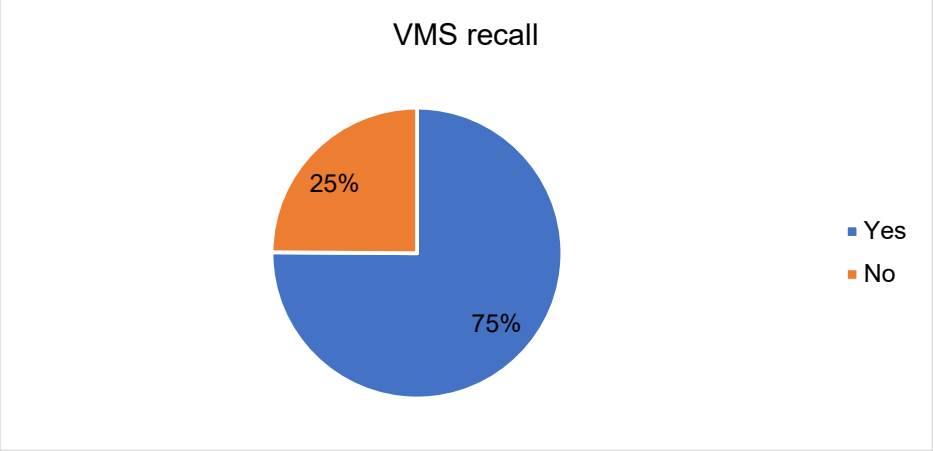


Figure 4 VMS recall

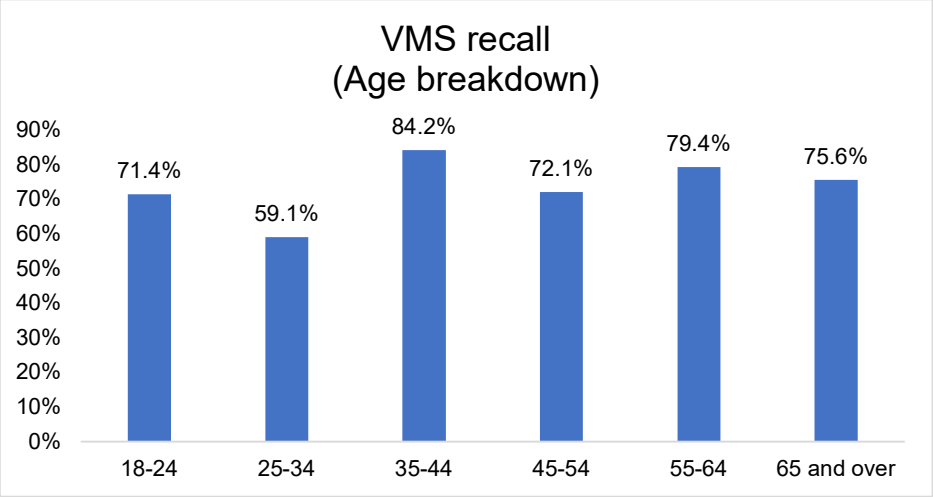


Figure 5 VMS recall (age breakdown)

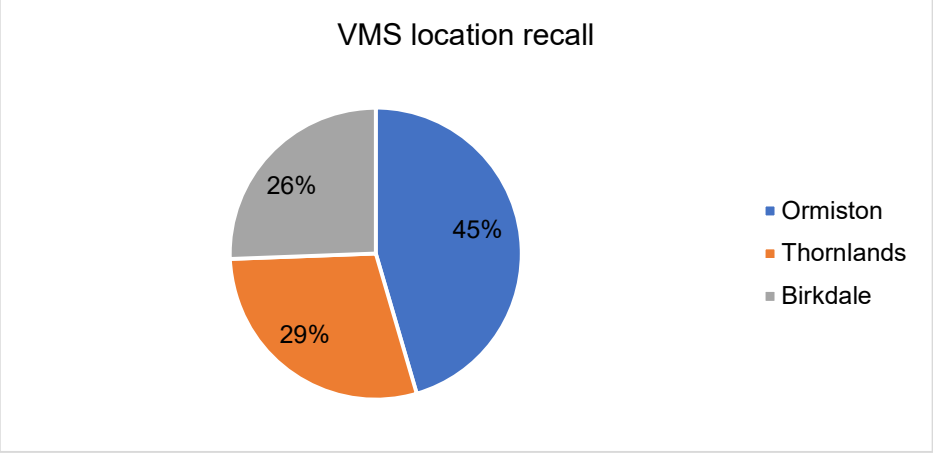


Figure 6 VMS recall location

Comparing the pre and post surveys results in Figure 7, there is minimal change in respondents self-reported slowing down behaviour at koala signs with 90.1% reporting they slow-down in the pre and 90.5% reporting slowing down in the post survey. As the ten VMS were continuously displayed across both data collection time points in 2021/22, this explains the slight change over time, however they are both consistently high responses that have increased from the previous evaluation period in 2020/21 where 76.4% reported slowing down at koala signs.

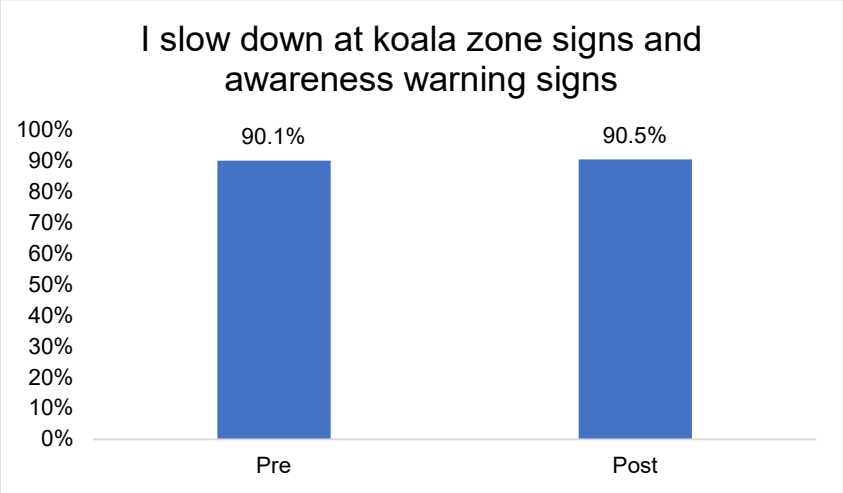


Figure 7 I slow down at koala zone signs and awareness warning signs

Figure 8 shows the age breakdown of the people who reported below/above averages on the self-reported slowing down behaviours. It is evident people aged between 18 and 34 take less action towards slowing down when seeing the VMS compared to the respondents aged 35 and older.

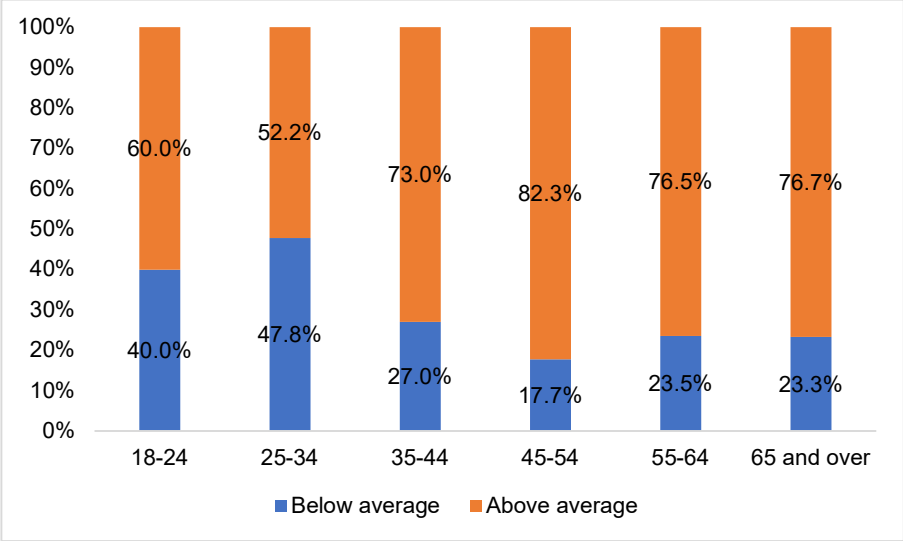


Figure 8 Age breakdown of slowing down behaviours

Koala Awareness and Attitudes

The Koala Awareness Campaign 2021/22, which was run from 25 September 2021 to 31 December 2021 aimed to increase awareness about koala breeding season and encourage residents to be vigilant and take appropriate action where possible.

Respondents were asked to indicate the last time they saw a koala, Figure 9 shows half (51%) of the respondents had not seen a koala in the last 12 weeks in the pre survey and more than two thirds (69%) in the post survey (Figure 10).

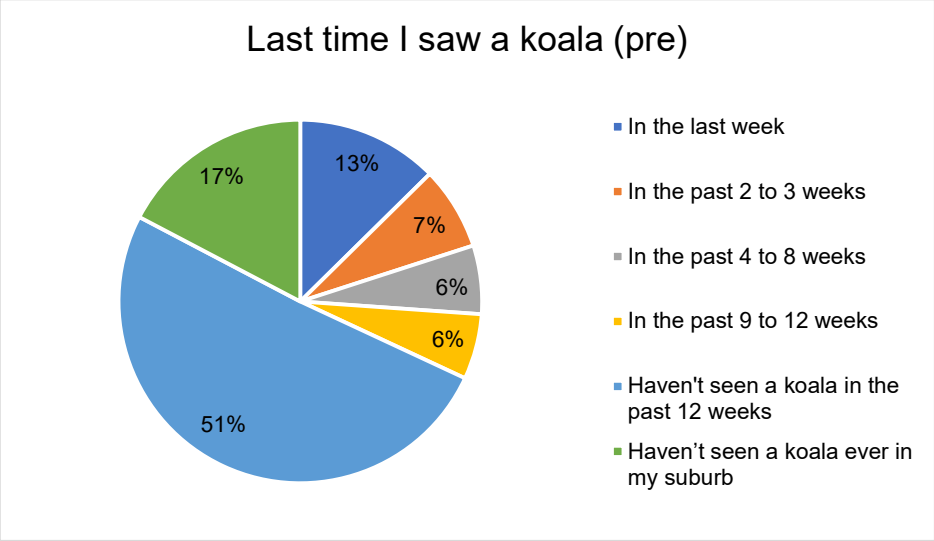


Figure 9 Last time I saw a koala (pre)

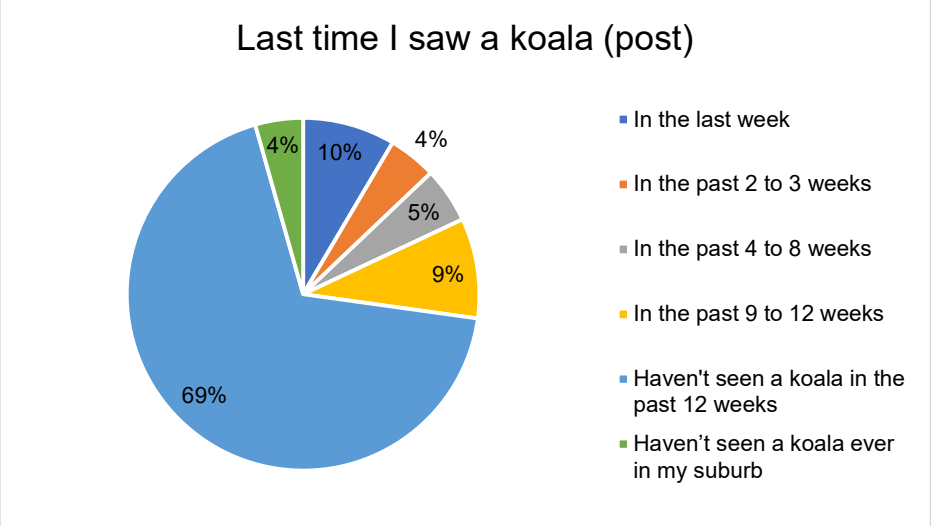


Figure 10 Last time I saw a koala (post)

Respondents were asked to indicate to what degree that they agreed that conserving koalas in their neighbourhood was important, whether people close to them wanted them to take actions to protect koalas and their confidence to take actions to protect koalas. Respondents answered on a scale of strongly disagree =1 to strongly agree = 7, the average response (mean) from all participants was used to understand the agreeance to the statements.

Results indicate that overall, there is a high agreement among attitudes of Redlands Coast respondents' that conserving koalas in the neighbourhood is important (pre mean= 6.66; post mean= 6.41), however there was a significant decrease in agreement to this statement between pre and post ($p < 0.05$) nevertheless this attitude has remained high. There was also a significant decrease in respondents' perceived confidence in their abilities to take actions to protect koalas in the neighbourhood between pre and post ($p < 0.001$) and their agreement that people who are important to them think that they should take actions to protect kolas ($p < 0.001$) While respondents' believe that conserving koalas is important in

Redlands Coast, there was a decrease in them feeling confident they know how to do that (see Figure 11).

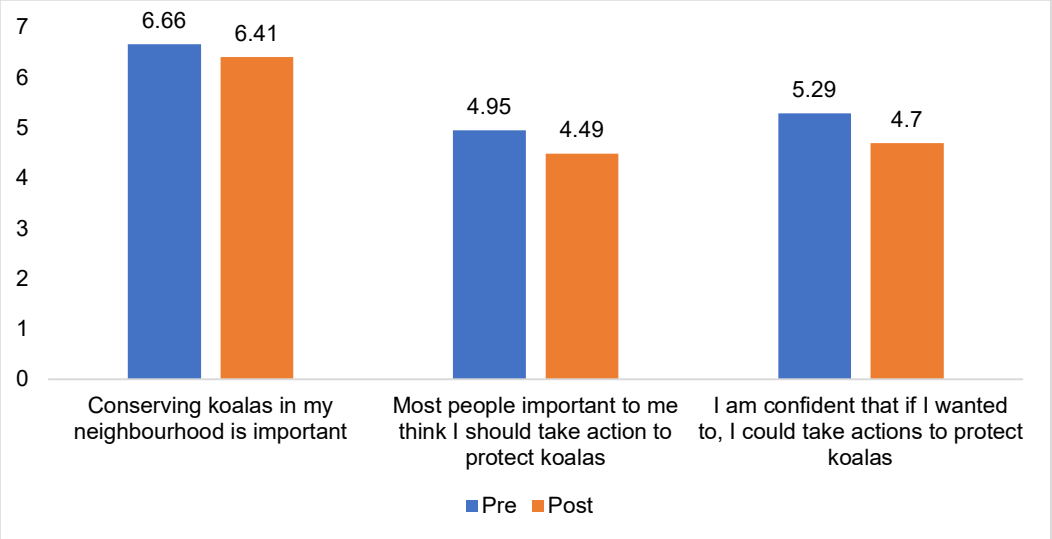


Figure 11 Koala attitude, norms and self-efficacy

In the pre survey, to understand Redlands Coast residents' level of knowledge a question regarding koala fatality causes was included. Respondents could tick all that apply (disease, vehicle strikes, habitat loss, dog attacks, fencing or drowning). Analysis indicated that there is an extremely high understanding of koala fatalities due to disease, habitat loss, vehicle strikes, and dog attacks (see Figure 12). Death due to improper fencing or drowning scored lower. Overall, there is an elevated level of understanding koala fatality causes before the campaign ran.

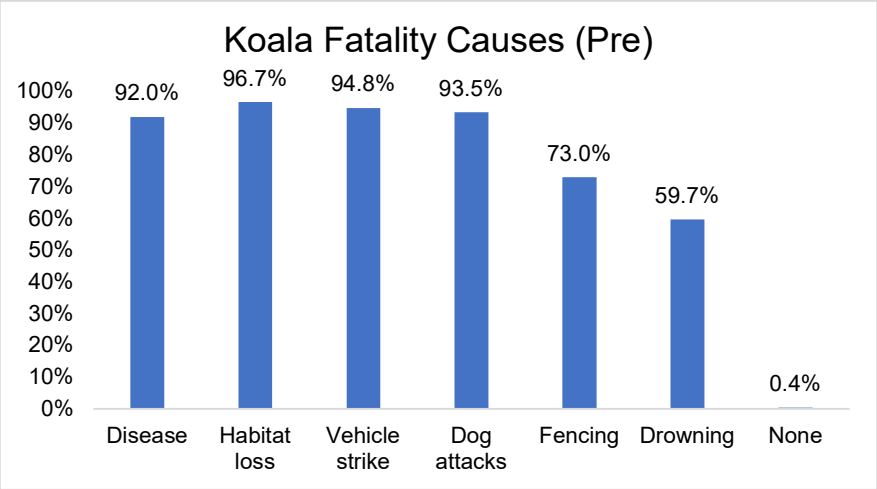


Figure 12 Koala fatality causes (pre)

In the post survey, respondents were asked to rank koala fatality causes by severity to their best knowledge; most severe being numbered 1 through to least severe at 7. Analysis was conducted by allocating weights to each rank (1-7) and left us with the weighted totals for each fatality cause. Habitat loss was found to be the most highly ranked cause of koala death, with disease and vehicle strikes following. See Figure 13 for more detail. The pre survey

showed very high knowledge of koala fatality causes and post survey results showed that residents have a good understanding of the order of severity of koala fatality causes. Overall, it appears that knowledge of koala fatality causes in Redlands Coast residents is high and is no longer a barrier to action.

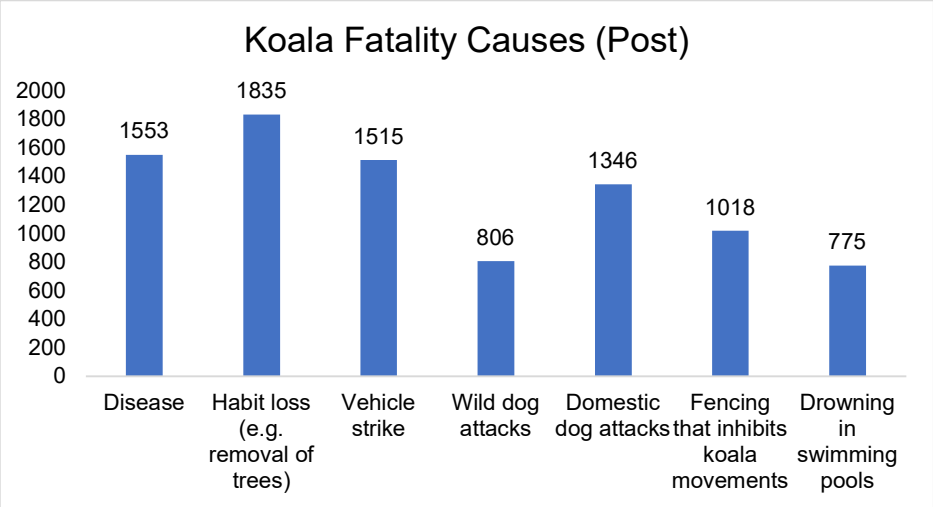


Figure 13 Koala fatality causes (post)

To further test respondents' knowledge, they were asked whether they know when breeding season starts and ends (see Figure 14). Well over half (67.1%) of residents did not know when koala breeding season starts and ends. Furthermore, those aged 65 and over have significantly more knowledge of breeding season than all other age groups ($p < 0.05$). Of those who selected they knew breeding season period (n=104), 41.3% selected August as the beginning of breeding season and only 13.5% selected December as the end of breeding season in Redlands Coast region.

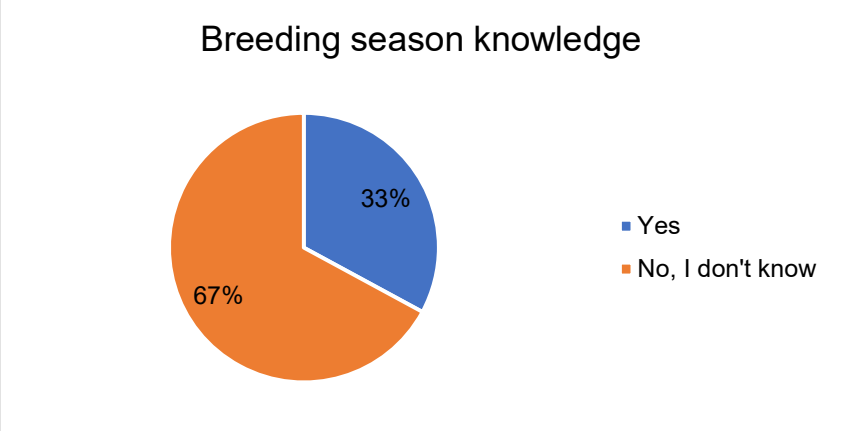


Figure 14 Breeding season knowledge

Respondents were then also asked to identify what the current conservation class of koalas in Queensland is. Koalas' conservation class was upgraded from vulnerable to endangered in February 2022. Over half (58%) correctly identified koalas as endangered (see Figure 15).

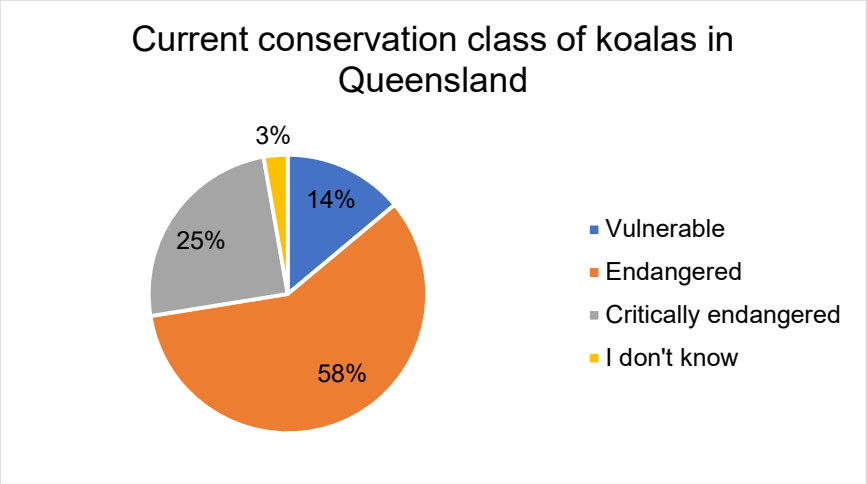


Figure 15 Conservation class of koalas in Queensland

Respondents were asked who should be most responsible for koala conservation in Southeast Queensland with the ability to rank six different answers from most responsible = 1 to least responsible = 6. Using weighted totals, it was found local and state governments were identified as most responsible for koala conservation (see Figure 16). Redlands Coast residents believe that all governments should be responsible over most of koala conservation actions in the community.

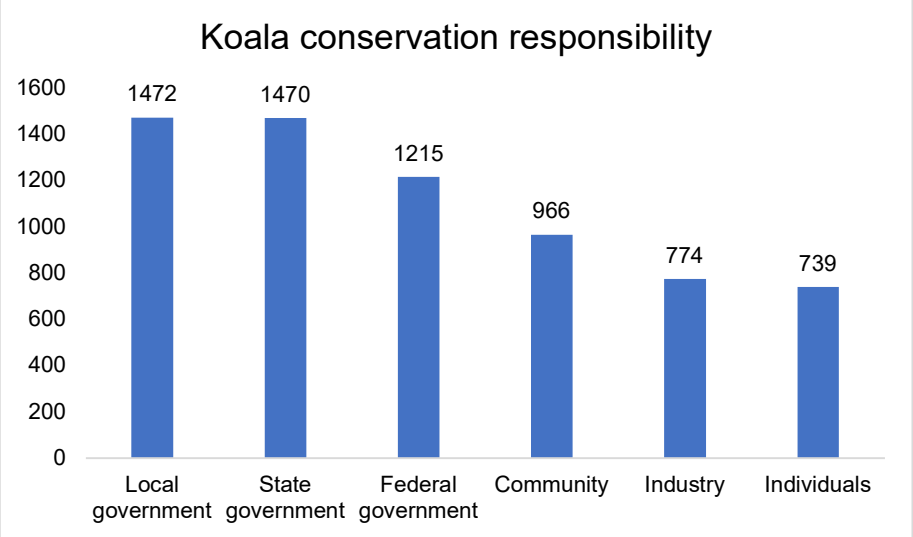


Figure 16 Koala conservation responsibility

Participants in the post survey were asked a series of “Would you ever...” questions about what they would do when coming across/interacting with koalas in the wild (e.g., Would you ever touch a tree a koala is sitting in? [Yes/No]. Figure 17 shows, koala vigilance responses are consistently high among Redlands Coast residents indicating that they know how to interact and behave around koalas when they spot them in the community.

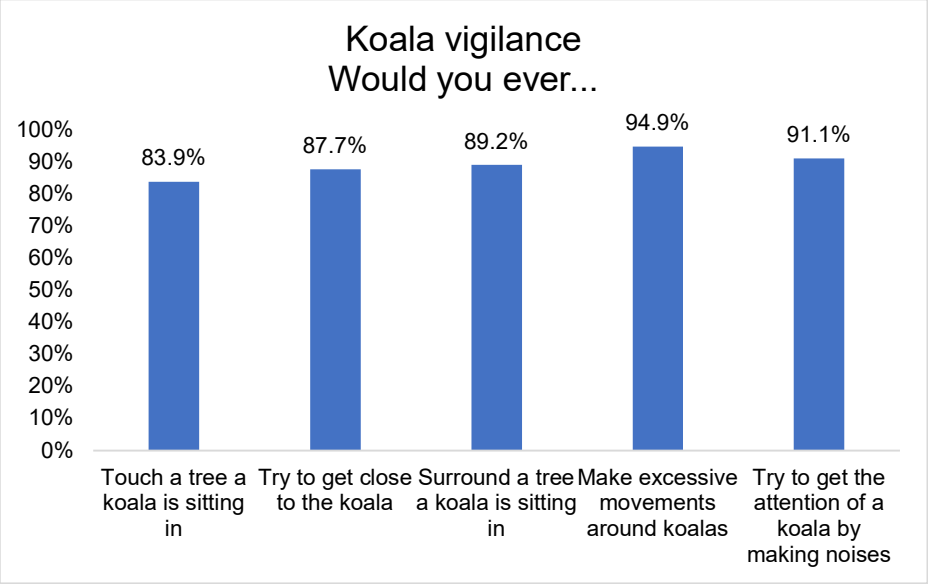


Figure 17 Koala vigilance

Respondents were then asked a series of question about the actions they take towards koala conservation. In the post survey, the questions pertaining to wildlife escape measures and tree preservation only included residents who owned their home to try and more accurately reflect the ability of respondents in being able to partake in conservation behaviours around their home. Because of this added condition to the survey, the percentage of fence and pool escapes installed has significantly increased between pre and post (see Figure 18). In the post survey 41.5% of Redlands Coast respondents that owned their home had a fence escape installed and 14.6% had pool escapes installed.

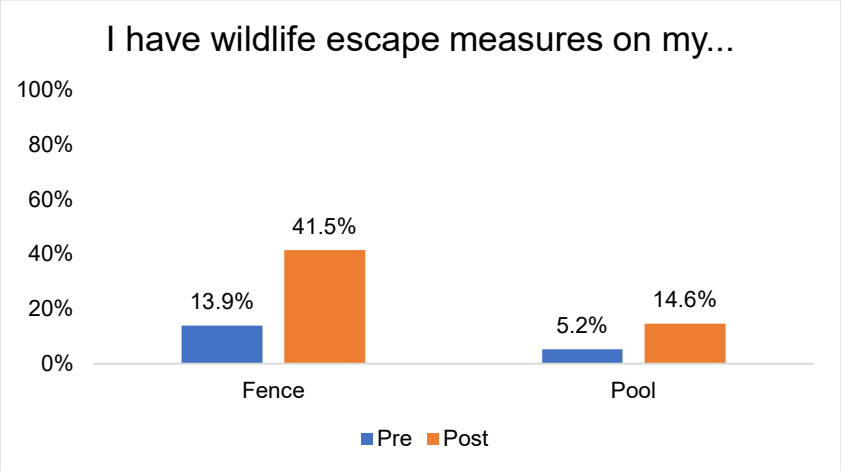


Figure 18 Wildlife escape measures installed

To further understand the range of actions respondents, take for koala protection, they were asked if they volunteered for a koala conservation organisation in the last 12 months with 7.3% of respondents stating they had volunteered at least once.

Many of the activities undertaken included volunteering with wildlife rescue organisations (n=7) completing rescues, transporting sick/injured koalas, and taking rescue calls. Another popular volunteer activity was tree planting (n=6). Respondents were asked if they donate to

koala conservation organisations, with 22.5% of respondents agreeing that they donated over the last 12 months (see Figure 19). Donation amounts in the last 12 months was as small as $3 and up to $800, the average amount donated was $18.79. The top organisations donated to from the respondents are the Koala Action Group (n=8), WWF (n=8), Redlands Koala Conservation Group (n=4) and Port Macquarie Koala Hospital (n=4).

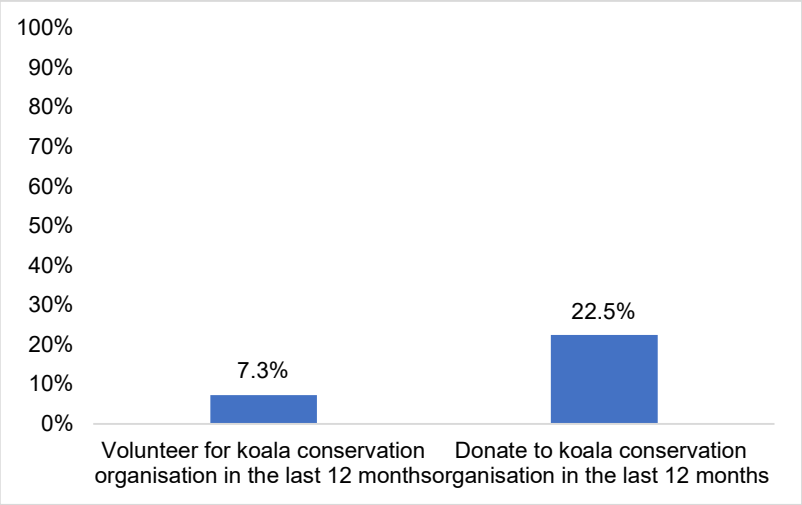


Figure 19 Volunteered or donated in the last 12 months

Reporting koala sightings is one of the most important actions community members can take as it allows decision makers to improve local koala mapping which can contribute to planning and development decisions, reduce the incidence of sick and injured koalas and help the development of further conservation actions. As such several questions around koala reporting knowledge and action was included in the pre and post survey.

Respondents were asked if they know how to report a koala sighting with a slight increase in results between pre (45.3%) and post (49.4%) as seen in Figure 20. Analysis of the post results indicate that knowledge of how to submit a koala sighting by age shows that only 25% of respondents aged between 18-24 know how to submit a sighting, while the age group 55-64 and 65+ have over half of respondents (50% and 58.4%) that know how to report koala sightings (see Figure 21).

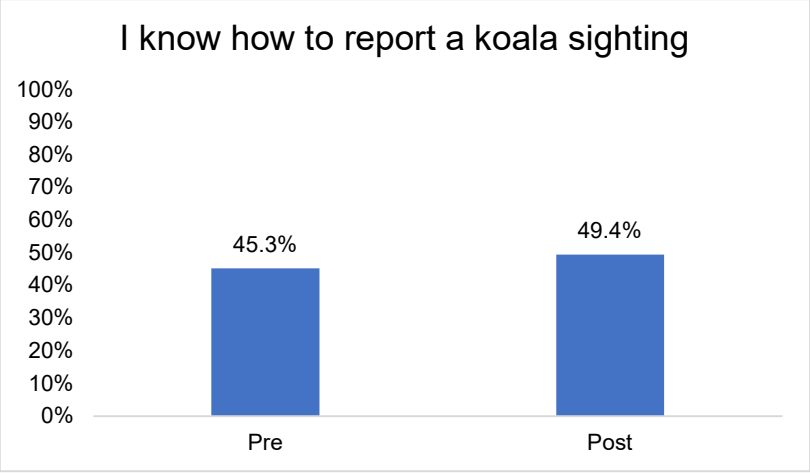


Figure 20 Know how to report a koala sighting

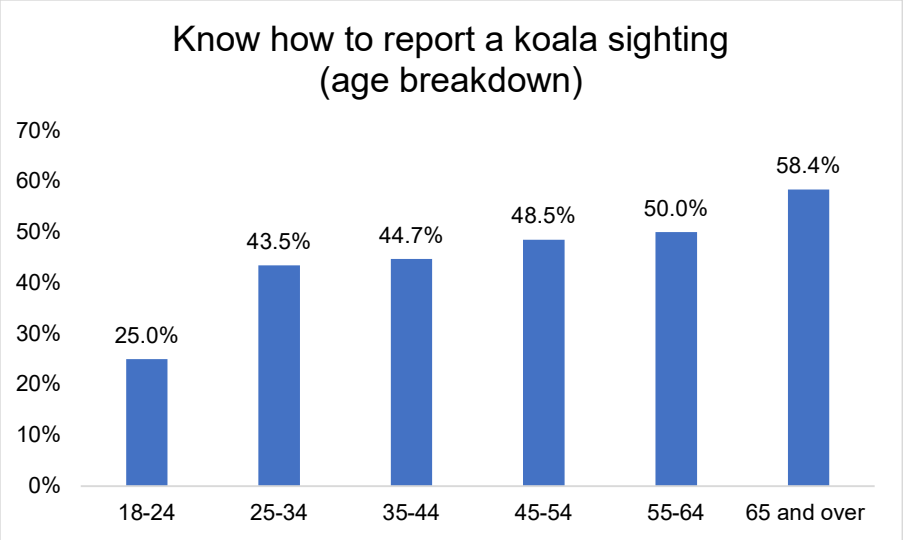


Figure 21 Know how to report a koala sighting (age breakdown)

In the post survey, only respondents that indicated that they knew how to submit koala sightings were asked further questions about their koala sighting and reporting actions. 29.5% of respondents had stated that they submitted one or more koala sightings in the last 12 months compared to 30.7% in the pre survey (see Figure 22), no significant changes observed.

For those respondents that said they have submitted koala sightings, in the last 12 months on average they went koala spotting 60 days (n=17) and reported on average 25.3 koala sightings (n=22). Of those participants who reported koala sightings in the last month, the most frequently identified channel they submitted the sightings to was Redlands Coast Koala Watch (56.5%), Council website (19.6%) and iNaturalist (13%).

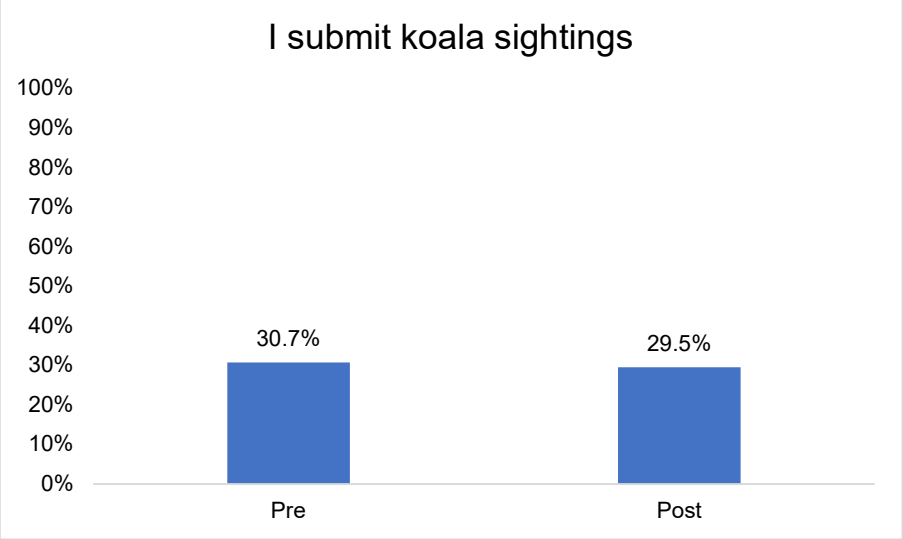


Figure 22 Submit sightings

Redlands Coast residents were asked in the pre survey if they could identify a sick koala (1 = strongly disagree to 7 = strongly agree), only 15.4% of respondents strongly agreed that they could identify a sick koala, while the majority of respondents were near the neutral mark where they neither agreed nor disagreed (24.5%). In the post survey, to try and more accurately gauge the ability of Redlands Coast residents to identify sick koalas, respondents were asked to identify from a series of six koala images the sick koalas, they were able to choose more than one answer. The images depicting a 'sick koala' covered a range of identifiable issues including crusty eyes (conjunctivitis), discoloured/dirty bottom (chlamydia), and sitting at the bottom of a tree.

Figure 23 shows the percentage of respondents that correctly identified a koala as sick or healthy. Most respondents correctly identified the koala with conjunctivitis (sick 3) as sick (88.6%), while the koala with a dirty bottom (sick 1) was recognised the least of the sick koalas with only 66.8% of respondents correctly identifying it. Overall, just under a quarter (23.7%) of respondents were able to correctly identify all three sick koalas. Of interest, however, is that the 'healthy koala 2' sleeping in the tree was identified by 41.1% of respondents as sick. There is some discrepancy in respondents' abilities to identify some key signs of a sick koala which could impact the chances of sick koalas being reported and receiving help.

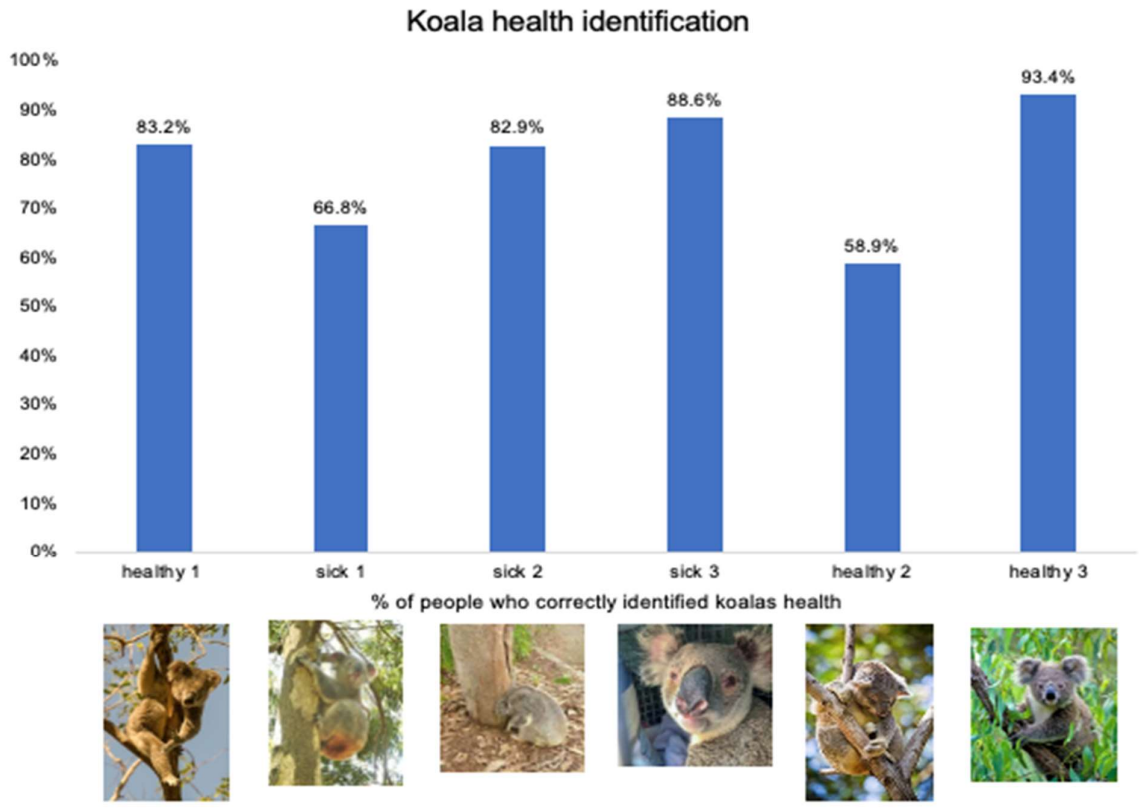


Figure 23 Koala health identification

Respondents were then asked the intentions they plan to take towards koala conservation in the next 12 months, using a 0% chance to 100% chance scale. Half (52.9%) of respondents

said they would 100% report a koala sighting if it occurs in the next 12 months. Figure 24 illustrates those who answered 100% for each intended action.

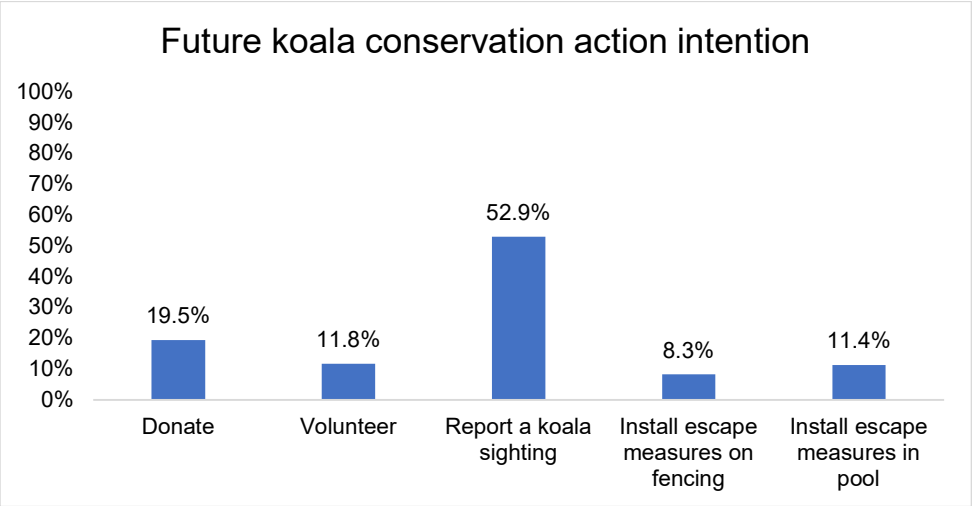


Figure 24 Koala conservation action intention

Exposure to multiple initiatives: Koala awareness and attitudes

This section examines whether exposure to one, none or all the initiatives impacts the levels of knowledge, awareness, and attitudes towards koala conservation in Redland Coast residents.

Analysis was conducted to divide the respondents into one of the four categories 1) saw both koala awareness campaign and VMS 2) VMS only 3) koala awareness only and 4) neither koala awareness nor VMS. Almost half (47.8%) of respondents have been exposed to and recall both the Koala Awareness Campaign and VMS initiatives and only 11.7% had not been exposed to any initiative (see Figure 25 for a further breakdown).

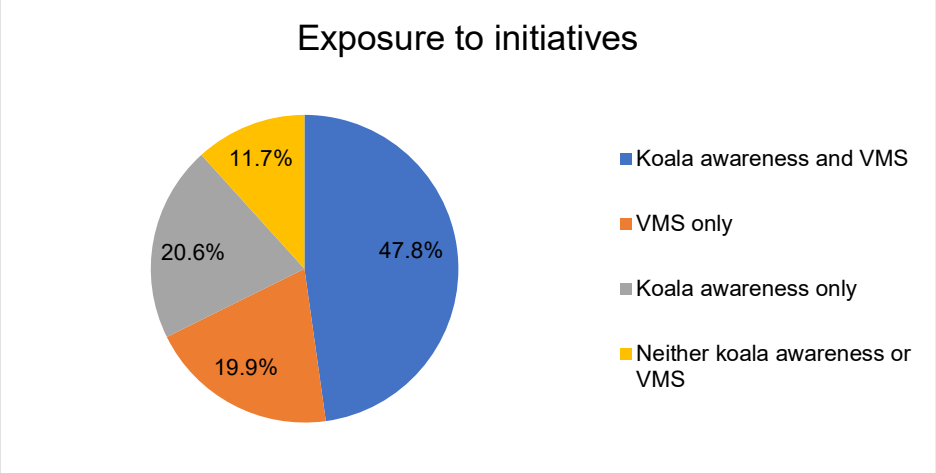


Figure 25 Exposure to initiatives

The group of residents who have neither recalled Koala Awareness Campaign and VMS appear to have the highest attitudes towards conserving koalas in Redlands Coast, however the difference from the three other groups is not significant. Similarly, there are no significant

differences between the groups and their social norms and self-efficacy to koala protection actions (see Figure 26).

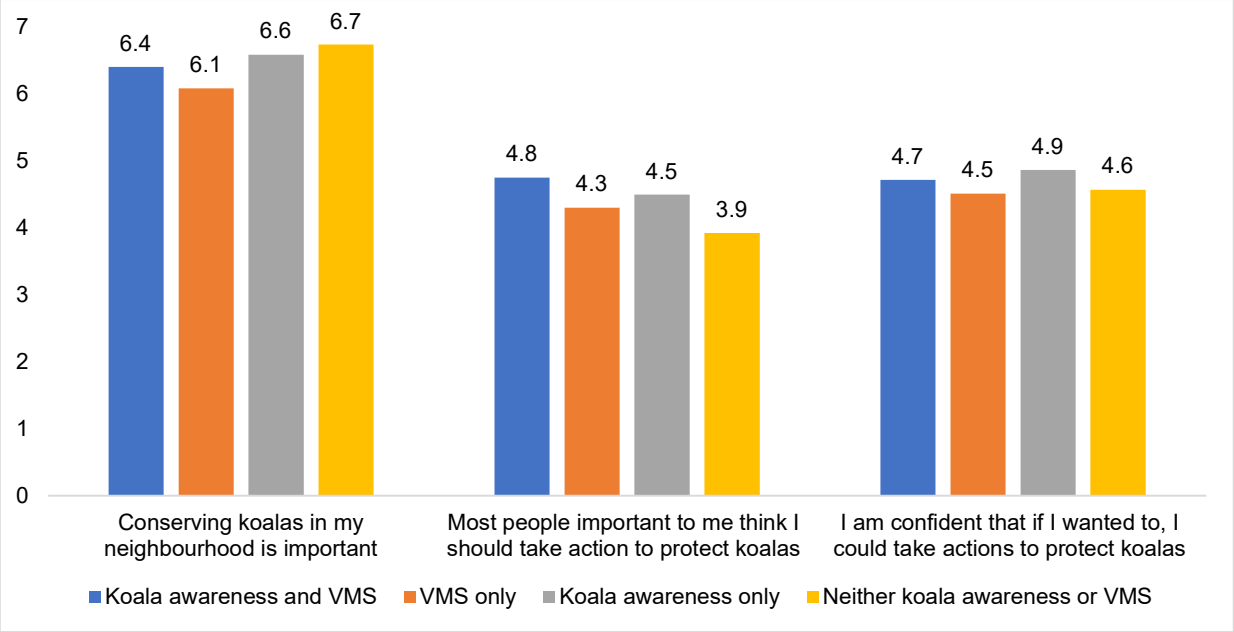


Figure 26 Attitudes, social norms, and self-efficacy (initiative breakdown)

Looking at the breakdown in knowledge on how to report a koala sighting, those that have recalled 'neither koala awareness and VMS' have significantly less knowledge with 29.7% of respondents knowing how to report when compared to the other groups who recalled various initiatives ($p < 0.05$) (Figure 27). Those that recalled the 'koala awareness and VMS' (57%) and 'koala awareness only' (47.7%) had the most knowledge on how to report a koala sighting in the Redlands Coast. Furthermore, respondents that recalled 'koala awareness and VMS' (42.4%) and 'koala awareness only' (32.3%) were the most knowledgeable of the timing of the koala breeding season. Reporting koala sightings and breeding season knowledge were key messages shared in the 2021/22 campaign. This analysis indicates that exposure to campaign elements delivers improved knowledge and understanding.

While knowledge on how to correctly identify sick koalas was low across the board, those who recalled 'koala awareness only' had the highest correct response to identifying sick koalas (29.2%) while those that did not recall or had been exposed to 'neither koala awareness and VMS' had the least knowledge on how to correctly identify a sick koala (13.5%) (see Figure 27 for full breakdown of koala health identification).

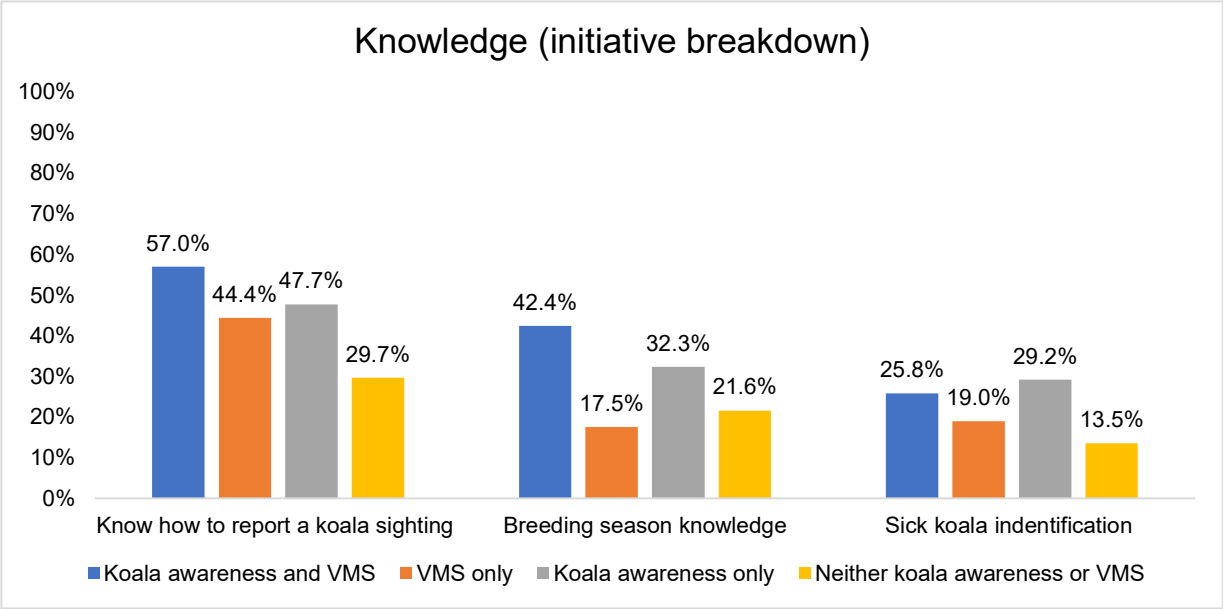


Figure 27 Knowledge: koala sighting, breeding season, koala health identification (initiative breakdown)

On average those respondents who recalled the 'koala awareness and VMS' had a higher participation in conservation actions including having a fence escape, volunteering, donating, slowing down and being part of a koala monitoring group (see Figure 28).

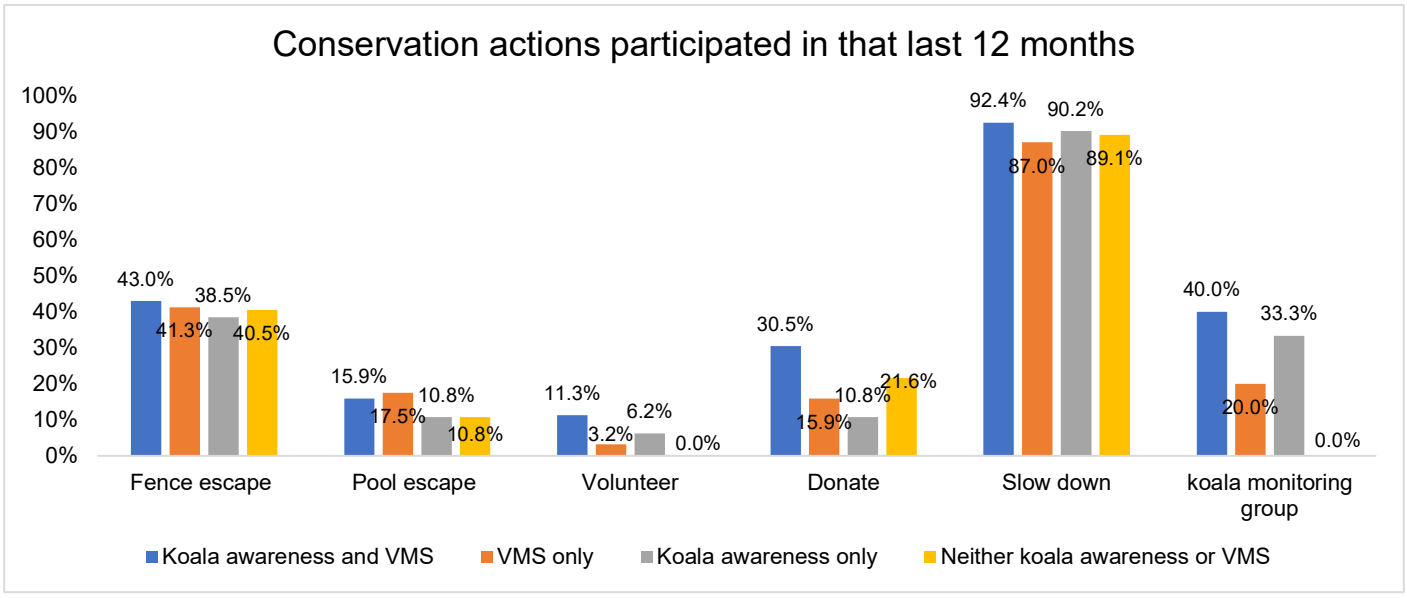


Figure 28 Conservation actions participated in (initiative breakdown)

Conclusions and Recommendations

In conclusion, the Koala Awareness Campaign and the VMS campaign in 2021/22 have delivered effect in community. The majority of the evaluation items either remained high or they improved, with few metrics recording slight decline, some of which are to be expected given the timing of post survey implementation where koala movements are expected to be lower (March to May when compared to August to September which coincides with the dispersal season). Key conclusions are:

- 68.4% of respondents recall seeing one or more of the campaign messages. The most recalled message was the 'Koala wants a wife' (59%), a refreshed play on the already established bachelor campaign that ran previously over 2018 to 2021. This finding demonstrates the importance of promoting a message over time.
- Key 'action orientated' messages were recalled more frequently (ranging from 14-18%) when compared to the 2020/2021 campaign (8.8%).
- Similarly, to previous years, bus shelters, billboards, buses, and Facebook were the most effective channels to reach the Redland Coast audience.
- Knowledge of koala fatality causes, and severity of fatality causes is high among residents. Consistent education of fatality causes over the four years has overcome knowledge as a barrier towards action.
- Knowledge of how to submit koala sightings is varied between age groups but is consistently under 50% for respondents aged between 25-54 and considerably lower in the 18-24 age group with only 25% of this cohort reporting they know how to submit a sighting.
- Koala awareness metrics (e.g. attitude, norms, and self-efficacy) have decreased when compared with previous years' data.
- The number of Redlands Coast residents who report koala sightings has remained unchanged between pre (30.7%) and post (29.5%).
- Of the Redlands Coast residents who have submitted sightings, over half report submitting their sightings via the Redlands Coast Koala Watch group. This demonstrates a clear shift in the koala sighting reporting behaviours.
- 75% of respondents recall the VMS, with Ormiston being the suburb where VMS signs were most recalled
- 'Slow down' and 'koala faces' were the most recalled message/images being shown on the sign
- Reported slowing down behaviour remained high at 90.5% and was higher than reported after the 2020/21 campaign (76.4%).

Consideration has been given to message placement, message content and calls to action for the 2022/23 Koala Awareness and Redlands Coast Koala Watch campaigns.

Media channels

The campaign utilised a broad cross section of communication channels including billboard signage at Ormiston and Capalaba Central, newspaper advertising (Redland City Bulletin), radio advertising (Bay FM), shopping centre displays, bus sides (Go Transit), signage (bus shelters, local parks and reserves, banners on the Council fencing at IndigiScapes), social and digital advertising (Facebook, Instagram, Snapchat and Google Ads), social media posts (IndigiScapes Facebook page), newsletters (Koala Safe Neighbourhoods, Councillor newsletter to residents, Redlands Coast Koala Watch and IndigiScapes), magazines (Our Redlands Coast), posters and flyers (Redland City Council customer service centre and libraries), a media release, website and internal communications to all Redland City Council staff.

In terms of channels recalled by survey respondents, it was found that bus shelters (n=109), billboards (n=108) and the side of the bus (n=48) were the most effective promotional channels followed by newspapers (n=4), magazines (n=3), and roadside signs (n=3). Instagram (n=1) and Snapchat (n=1) were the least recalled channels.

For the 2022/23 Koala Awareness Campaign Redland City Council should continue to use billboards, bus shelters, side of bus, newspaper (Redland City Bulletin), and magazine (Our Redlands Coast), radio and shopping centre communication channels. If paid social media (Snapchat and Instagram) are to be continued consideration needs to be given to audience engagement to determine if audiences are being effectively engaged via these social media channels, and in the event engagement is above benchmark rates, more budget allocation to boost top performing posts is recommended. Ensuring organic posts appeared on the Redland City Council Facebook page would help to reinforce message to the broader Redlands Coast community beyond the already converted IndigiScapes Facebook community.

Alternate communication channels that can be considered by the Council to convey calls to actions when and where residents need it the most include delivering:

1) The Redlands Wildlife Rescue Service number via a glovebox checklist,
2) Protective koala actions and other support (e.g. donating to local rescue groups and volunteering) that homeowners and renters can take, including Redlands Koala Watch QR codes, via magnets or stickers that can be placed in the home, and
3) Redlands Koala Watch QR codes on water bottles and other items people would use when out walking.

Koala awareness messaging

Analysis of data demonstrates that knowledge of key koala death causes is high across the Redland City Council area while self-efficacy, social norms and intentions are comparably lower. Residents are now aware of the koala movement season and core causes of koala deaths. The Koala Awareness Campaign has demonstrated its ability to encourage drivers to slow down and it has contributed to koala protective home installations, reductions in driving speeds in koala areas and some residents have reported sightings through Redlands

Coast Koala Watch. Key messaging should be continued to maintain high rates of awareness and core koala knowledge.

To extend community uptake of key calls to action in the 2022/23 season a new messaging approach is needed to drive community action. Data analysis indicates that many residents are unable or are unlikely to act. Residents aren't confident about what they can do, many don't know what a sick koala looks like and few donate or volunteer. Additionally, data analysis demonstrates that many people don't feel it is their responsibility to take action nor do many feel that they think others think they should take action.

Messages need to be developed that effectively engage people aged 18-40. Messages making it easy to submit koala sightings is recommended, and a range of additional communication channels that could be considered have been recommended. Messaging is needed to increase people's knowledge and skills about sick koalas. Data indicates that residents' ability to distinguish between sick koalas and healthy koalas can be greatly improved. Tailored messaging around helping residents to identify the signs of sick koalas will be beneficial particularly on the occasion where the koala has chlamydia (dirty bottom).

Messages need to be developed to tell the stories of residents who are taking actions to protect koalas. The May 2021 Social Marketing @ Griffith Evaluation of koala conservation campaigns using co-design report identified (see page 17) that people "*want to be informed with data, statistics and measurable results on topics related to the numbers of koalas that have been saved, injured, or attacked ….They also suggested communicating facts related to what will happen if no action was taken to raise awareness among the community about the consequence of having them disengaged or less engaged in conserving koalas in the Redlands."*

Data from this report can be used to challenge norms by indicating how many people are taking action or not. Messaging that demonstrates the outcomes across the Redland City Council area that can be achieved if all take action are recommended. For example, use the areas where koala populations are known and high. Show community the current koala population numbers and movements using the mapping data. Develop messages that demonstrate what happens if the current numbers are protected (e.g. no further deaths) in one and two generations time. For example, see the creative developed by Social Marketing @ Griffith to demonstrate the effect that two saved koalas can have across two successive breeding generation if no further deaths occur (Figure 29). This image aims to demonstrate the potential impact from an act that saves one female koala joey.

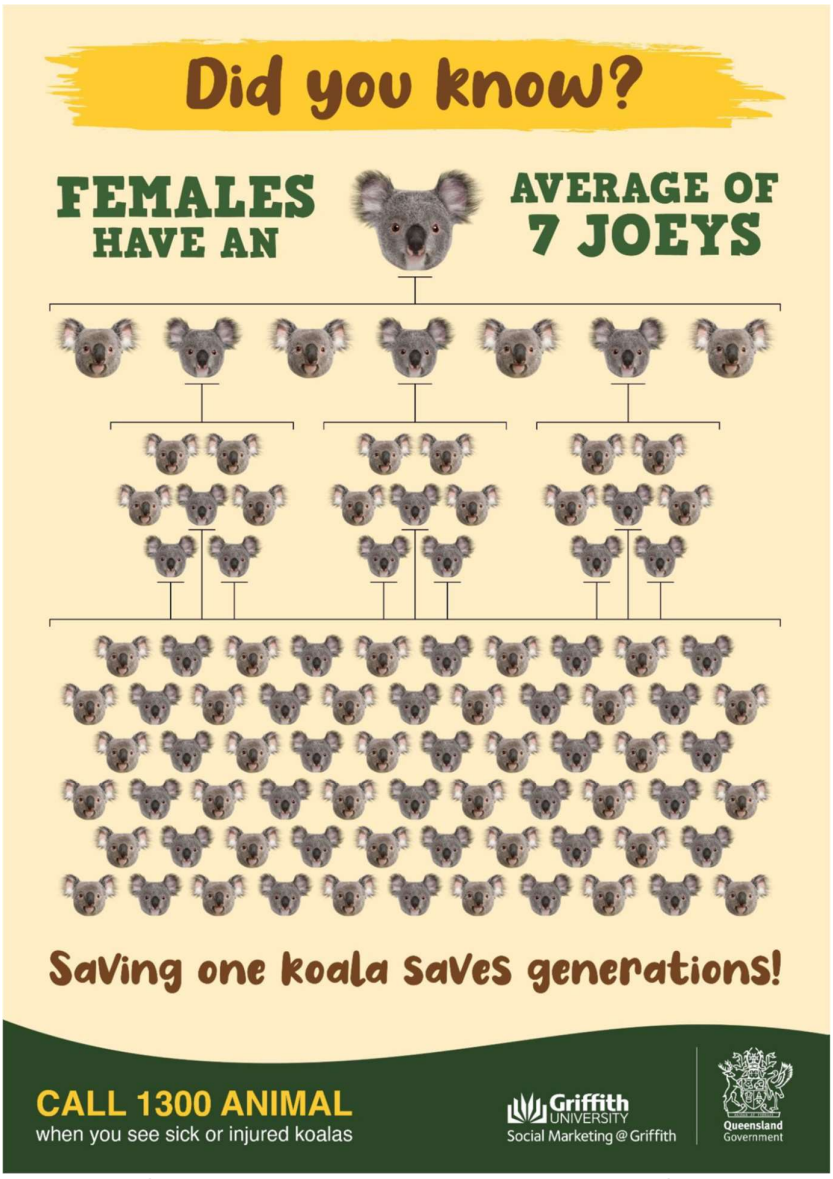


Figure 29 Communicating what can be achieved if we take action

VMS installations should continue as they provide a clear and noticeable call to action for Redlands Coast residents to slow down. Based on self-reports, future VMS installations should follow the style used at Ormiston in the 2021/22 koala breeding season to ensure awareness and recall are maximised[1].

[1] This recommendation assumes that the Ormiston sign was able to encourage drivers to slow down as measured by traffic speed installations used in the 2021/22 trial.