Results of Survey about the Easy Ride Routes established by Whitehorse Council

WATAG

March 21, 2024

Executive Summary

The safety and usefulness of the ERRs for cyclists depends on both cyclists and drivers understanding and observing the special status of the streets included as cycling-focussed. However, only 28% of the respondents understand when they drive on an ERR, even though almost all of them are cyclists themselves. 60% report watching out for cyclists on the ERRs, but comments suggest that the respondents are likely to watch out for cyclists on any road. Bicycle use among this demographic is overwhelmingly recreational (exercise and recreation summing to 61%), although the 40% who do cycle for errands outnumber the 30% reported as cycling for transport on the national survey. Women cycle less frequently than men. Women also report lower confidence in riding. Only 37% of the participants are prepared to cycle on arterials, which raises the question about network connectivity for cyclists. Only 45% of respondents report taking advantage of ERRs, but 75% report feeling at least a little safer on them. Designated, separated bicycle paths that cannot be parked on topped the list of features that would make cyclists feel safer. This raises the question of a potential false sense of security, when few cyclists even realise when they are driving on one. The survey highlights the need for publicising ERRs, especially to drivers, and the fact that cyclists need safe, separate lanes that are not parked on.

1 Introduction

This WATAG survey aims to find out how well known, used and appreciated the Easy Ride Routes are, that Whitehorse Council has established as preferred routes for cyclists. The ERRs are 'a network of low-stress local streets and off-road cycle paths', mostly marked with bicycle symbols in the middle of the street to 'encourage drivers to be aware of people on bikes', 'and to help direct bicycle riders along routes that have low traffic volumes' [1]. The network of 3 east-west and 5 north-south routes is accessible here.

The survey was open over the period 1/10/2023 - 15/12/2023. There were 12 questions, some of which depended on the answer to a previous question. The questions were divided into the two themes of riding on ERRs and driving on ERRs. In each of these categories, the first question was put to every participant. Depending on the answer, the participant was shown one driving-related follow-on question and six cycling-related follow-on questions. Two general questions about gender and age were also asked. Hence, four questions were put to everyone and seven questions selectively depending on the answer to the initial question.

186 attempts at responding were made, 10 of them unsuccessful attempts with no meaningful answers. 119 of the 176 respondents were male, 47 female.

Participants were recruited by directly approaching cyclists and leaving posters on traffic light posts on intersections frequented by cyclists. Five cycling-related prizes were provided by two bicycle shops in the Whitehorse area and these were awarded in December 2023.

Given the recruitment strategy, it is obvious that the survey was taken predominantly by cyclists. We can assume that familiarity with ERRs and cycling-related matters is highest in the demographic we reached posting and handing out flyers to cyclists, mostly on or around the Gardiner's Creek Path north of Burwood Highway. A number of members of Whitehorse Cyclists, MeBUG (Metro East Bicycle User Group) and WATAG (Whitehorse Active Transport Action Group) answered the survey.

2 National Survey

The National Walking and Cycling Participation Survey 2023 (NS) [2], a biennial poll that covers Australia and Aotearoa, was carried out as phone interviews to randomly chosen households. The interview questions were answered by one resident for each household member. 282 Victorian households with 677 residents were included in the responses.

17.1% Victorians answered they had used a bicycle in the week before the survey, 26.4% in the month before the survey, which were the highest and second highest numbers among all states. For Victoria, cycling participation numbers are only insignificantly below the cycling participation of the Covid year 2021.

3 Driving and ERRs

3.1 $Q1$ - City of Whitehorse have introduced ERRs (easy ride routes) for cycling. Have you noticed these when driving?

This question intends to find out whether drivers in Whitehorse are aware of ERRs. This is crucial for cyclist safety; if drivers are unaware, they behave as they would on any other local street.

The survey was promoted to cyclists. We expect to find more awareness of ERRs and cycling in general among the participants of the survey than among the average population.

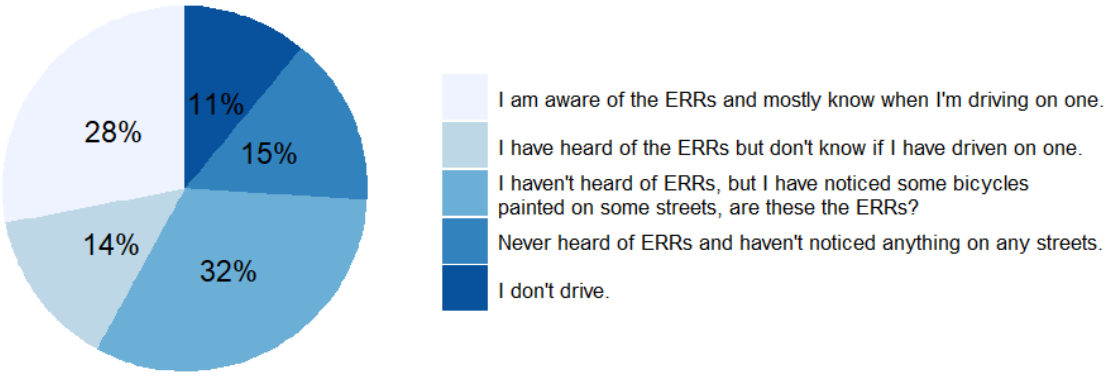

Figure 1: Pie chart of answers. All answers are shown. 176 responded to this question

Fig. 1 shows that even among respondents who predominantly cycle, only 28% know when they drive on an ERR. Given the power imbalance of 2tn vehicles to bicycles, the safety of cyclists, and therefore the usefulness of ERRs, very much depends on drivers being aware of ERRs.

3.2 $Q11$ - When you drive on ERRs (easy ride routes), or notice bicycle signage on roads, do you change your driving behaviour?

This question was only presented to participants who ticked one of the topmost three answers to $Q1$, Section 3.1, as drivers who do not know they are driving on an ERR, or do not drive at all, cannot

report adjusting their behaviour.

129 participants responded to this question. As multiple choices were possible, a total of 157 choices were made.

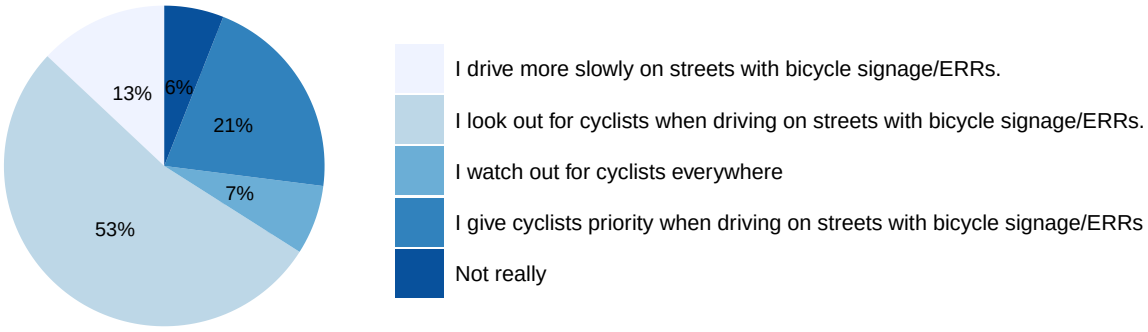

Figure 2: Pie chart of answers. Only the most popular choices are included. 129 responded to this question. Multiple answers were possible

The choices given were:

1. I try to avoid driving on streets with bicycle signage/ERRs
2. I drive more slowly on streets with bicycle signage/ERRs
3. I look out for cyclists when driving on streets with bicycle signage/ERRs
4. I give cyclists priority when driving on streets with bicycle signage/ERRs
5. Other, please specify:
6. Not really

The 'other' choice resulted in two new answers:

- The way finding is useful so I drive on them more (1 response)
- I watch out for cyclists everywhere (11 respondents)

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Because of the significant number of respondents (11) who added this option independently of each other, we included it in Fig. 2. It is quite possible that some respondents who chose answer 3 might have chosen this option had it been presented as one of the choices.

Answer 1 was chosen only four times. Drivers (even those who cycle themselves) do not seem to leave ERRs to cyclists.

4 Riding and ERRs

4.1 $Q2$ - How often do you ride a bicycle?

All bar one participant responded to this question.

Only 6% of the respondents do not ride at all. 79% ride at least several times a month. This confirms that our recruitment strategy has led to a predominance of cyclists in the participation, and that the answers are likely representative of the cyclist view in Whitehorse.

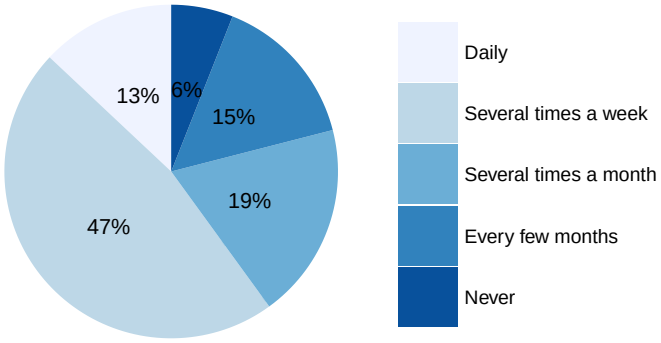

Figure 3: Pie chart of answers. All answers are shown. 175 responded to this question

4.2 $Q21$ - What type of trips do you make on your bicycle?

This question was not presented to respondents who answered 'never' to the question about cycling frequency (Section 4.1). Participants were encouraged to tick all that apply. 164 participants answered this question, and 394 choices were ticked. 125 respondents ticked multiple options, suggesting that a majority of respondents use their bicycle as a versatile means of transport. When we define exercise as a form of recreation, Fig. 4 illustrates that recreational use of bicycles makes up over 60% of the reasons why people use a bicycle. Commutes and errands can be defined as transport, i.e. the need to cover a distance to engage in a non-cycling-related activity. Transport comprises 40% of the activities the survey participants use bicycles for.

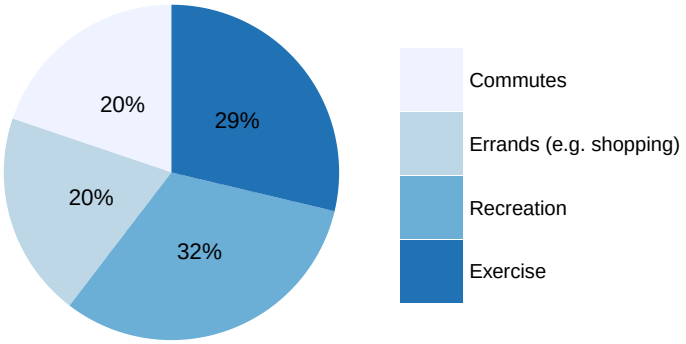

Figure 4: Pie chart of answers. The 'other' category is not shown. 164 responded to this question. Multiple answers were possible

The NS [2] listed two options as reasons for cycling, recreation and transport, and also allowed multiple answers. 30% of the time transport was chosen, while recreation was chosen 70% of the time.

We had included a free text 'other' option, but all responses received through 'other' could be allocated to one of the four given choices, i.e. commutes, errands, exercise and recreation. For example, visiting friends as well as taking children to school was reclassified as errand, because of the purpose of reaching a destination.

4.3 $Q22$ - How long are your trips on average?

This question was not presented to respondents who answered 'never' to the question about cycling frequency (Section 4.1).

164 participants answered this question. Only one choice was possible. In addition to the choices displayed in Fig. 5, 'Over 100km' was an option, but no participant ticked it.

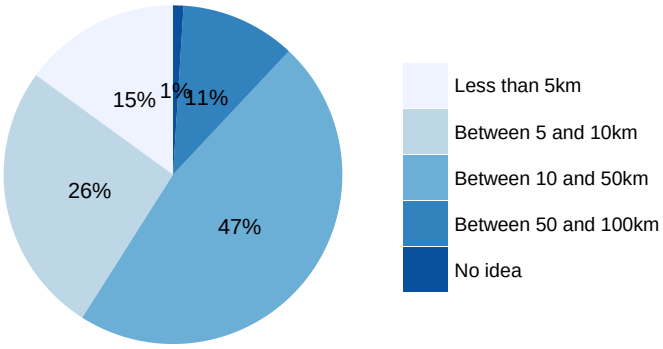

Figure 5: Pie chart of answers. The choice of 'Over 100km' received no responses and is not included. 164 responded to this question

Fig. 5 confirms the predominance of recreational ('recreation' and 'exercise') use of bicycles among the demographic of participants. People rarely run errands over a distance of 50km on a bicycle.

4.4 23 - How confident a cyclist are you?

This question was not presented to respondents who answered 'never' to the question about cycling frequency (Section 4.1).

This question accepted multiple answers from the following choices:

1. I am ok to ride on arterials with 60km/h speed limits
2. I am fine to mingle with cars on quieter streets
3. I ride mostly on protected lanes or off-road paths
4. I don't ride in the Whitehorse area, everywhere is too dangerous

As could be expected, the more 'courageous' choices subsume the more cautious ones. In other words, people who ticked answer 1 would also tick answers 2 and 3, because they require less confidence. Consequently, the answers were reduced to the 'most courageous' options, which makes the pie chart easier to read.

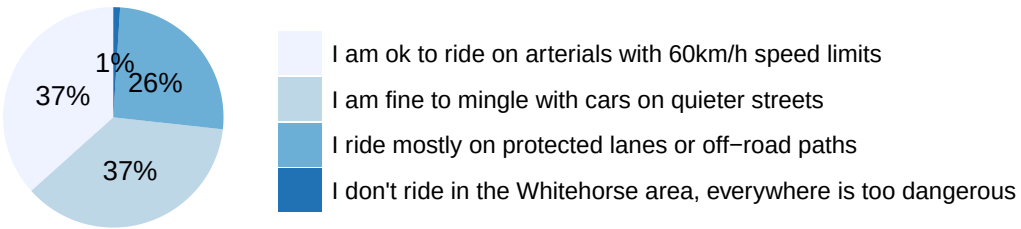

Figure 6: Pie chart of answers. Only the most 'courageous' choice is included. 164 responded to this question

Interestingly, although recreation/exercise are greater factors in bicycle use, less than 40% of respondents are prepared to cycle on major roads. The same number of respondents are prepared to mingle with cars on quieter streets. Only 26% stay on separate paths. As the participants are predominantly cyclists, we could expect that very few deem the Whitehorse area unsafe to cycle. It is conceivable that some respondents would prefer separate paths but could not reach their destinations without cycling on residential streets.

The NS [2] reports 15% cautious and 5% confident riders, i.e. one in four, for Victoria. Assuming 'confident' means the equivalent of option 1, and 'cautious' means options 2 and 3, more than one in three of the participants of the WATAG study are confident cyclists.

4.5 *Q*24 - City of Whitehorse have introduced ERRs (easy ride routes). How important are they to you as a cyclist?

This question was not presented to respondents who answered 'never' to the question about cycling frequency (Section 4.1).

39 respondents answered they have not heard of ERRs, 24% of the people who answered this question. These people were not asked about their perceived safety on ERRs (Section 4.6) nor what would make ERRs safer (Section 4.7).

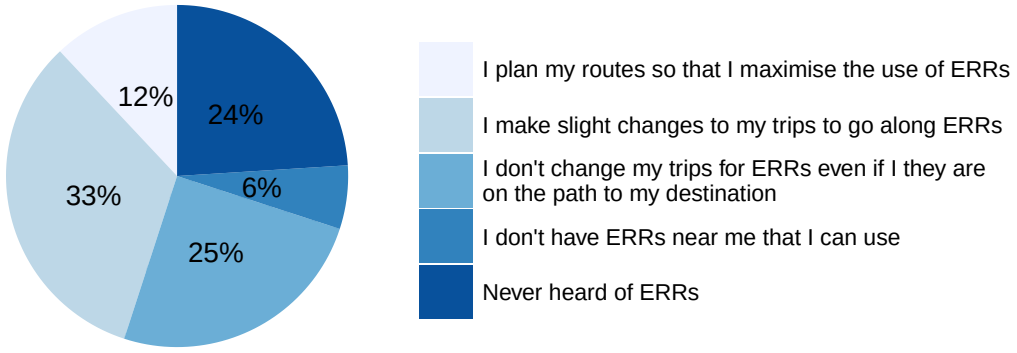

Figure 7: Pie chart of answers. 124 responded to this question

45% of respondents, just under half, plan their routes or at least make changes to their routes to ride on ERRs. A slightly larger percentage (49%) either does not know about ERRs or does not make an effort to use them.

4.6 *Q*25 - Do you feel safer when cycling on ERRs compared to similar streets?

This question was not presented to respondents who answered 'Never heard of ERRs' to the question about the importance of ERRs (Section 4.5).

The question received 124 responses. A majority or respondents feel at least a little safer on ERRs. The largest number answered a clear yes (40% or 50 respondents), while a quarter does not feel any safer.

4.7 *Q*26 - What would it take for you to feel as safe as possible on ERRs?

This question was not presented to respondents who answered 'Never heard of ERRs' to the question about the importance of ERRs (Section 4.5).

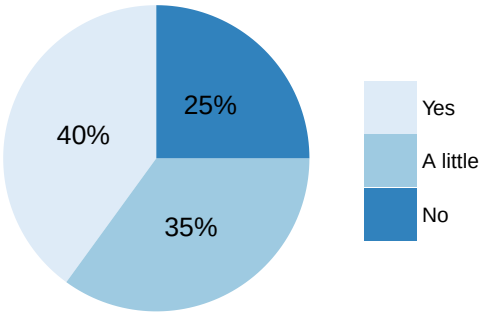

Figure 8: Pie chart of answers to the question whether people feel safer on ERRs. 124 responded to this question

Respondents were asked to tick as many as apply. 333 options were ticked by 124 respondents. 25 respondents ticked a single option, 96 several. The answers included a free text option under 'other'. About half of the 15 respondents who ticked 'other' and gave a personal comment, ticked other options in addition.

Reducing speed limits to 30km/h on residential streets could reduce road deaths in Australia by 13% [3]. Yet, only 20% of the choices ticked include lowering speed limits to 40km/h or 30km/h. One of the responses under 'other' illustrates the fear of drivers becoming 'frustrated' enough that they 'don't like cyclists on the road'.

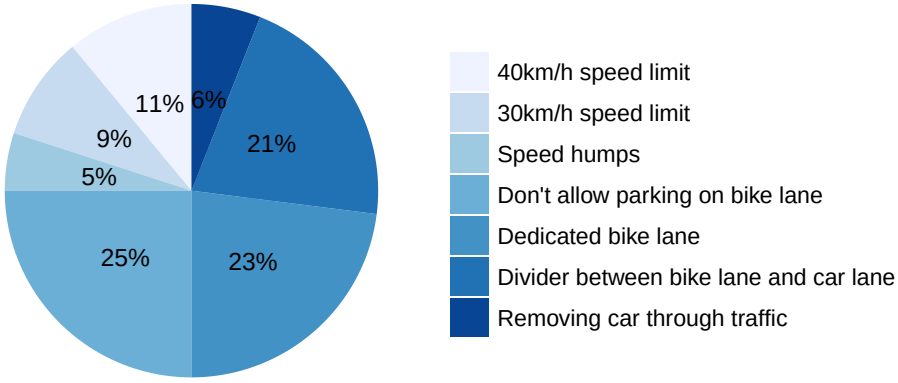

Figure 9: Pie chart of answers to the question whether people feel safer on ERRs. 124 responded to this question

Speed humps are the least popular option (5%), followed by removing through traffic (6%). Dedicated bike lanes are the most popular options, and almost all respondents who favour them believe that they should not be used for parking and they should be separated from the car lane by a divider.

The personal options entered under 'other' were (typos were not corrected):

- Driver education about cyclists, more policing of mobile phone use;
- ERRs feel safe, it's OFF these there is reason to worry;
- Increase the number of dual purpose footpaths;
- They are no different to other streets the person rides on;
- Making private ownership of cars a priviledge not a right. Reverse trend in increasing car size;

- Depends on location;
- Driver education would make the biggest difference. A dedicated bike lane would encourage other family members;
- Provide safe crossing points for very busy roads;
- Traffic calming such as wombat crossings, rumble strips, art work painted on the bitumen to signal to drivers of unusual conditions to slow them down.
- Make areas like bike path between Blackburn and Nunawading a more pleasant, green and less graffitied area to cycle;
- None of the above, voters are against bicycles;
- Signs educating drivers about chevrons;
- We cannot expect drivers to slow too much because it would frustrate them and make them resent cyclists. Need a compromise so lanes and a slightly lower speed limit that doesn't affect them too much;
- I'd feel safer if virtually all local streets were marked for bikes, so that it was a safe bike neighbourhood not just a single route that might not suit me;
- Bike pictures on middle of road, as on the ERRs.

The comment 'Signs educating drivers about chevrons' raises an important question, if indeed it means that 'sharrows' and the chevrons in them need clarifying. 'Sharrows' ([1]) are not official road signage according to VicRoads [4]. It would seem it is up to the driver whether they wish to respect it. The problem identified by this comment may be driver ignorance, but also driver reticence.

5 Demographic

5.1 $Q3$ - What is your gender?

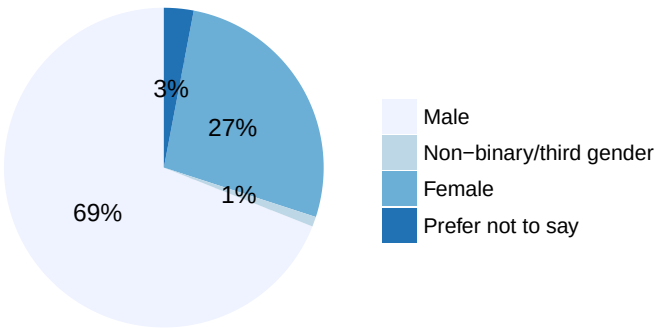

Figure 10: Pie chart of gender of respondents. 173 responded to this question

Almost 70% of participants are male. This is in line with a recent study by Monash University that surveyed 700 Melbourne residents. [5] They found that only one in three cyclists is female, and that to female cyclists, safety concerns are a significant barrier.

5.2 $Q4$ -What is your age?

This question had too many options to be meaningfully visualised with a pie chart. Table 1 has the details.

Table 1: Answers to the question about age

	Percent	People
Under 13	2%	4
13 - 17	6%	11
18 - 25	5%	9
26 - 45	26%	45
46 - 65	36%	62
65+	24%	41
Prefer not to say	1%	2
Total	100%	174

5.3 Gender and Age

Fig. 11 combines age and gender. The 'Prefer not to say' options have been omitted, as well as the non-binary option which was chosen only once, a person of age 13 – 17.

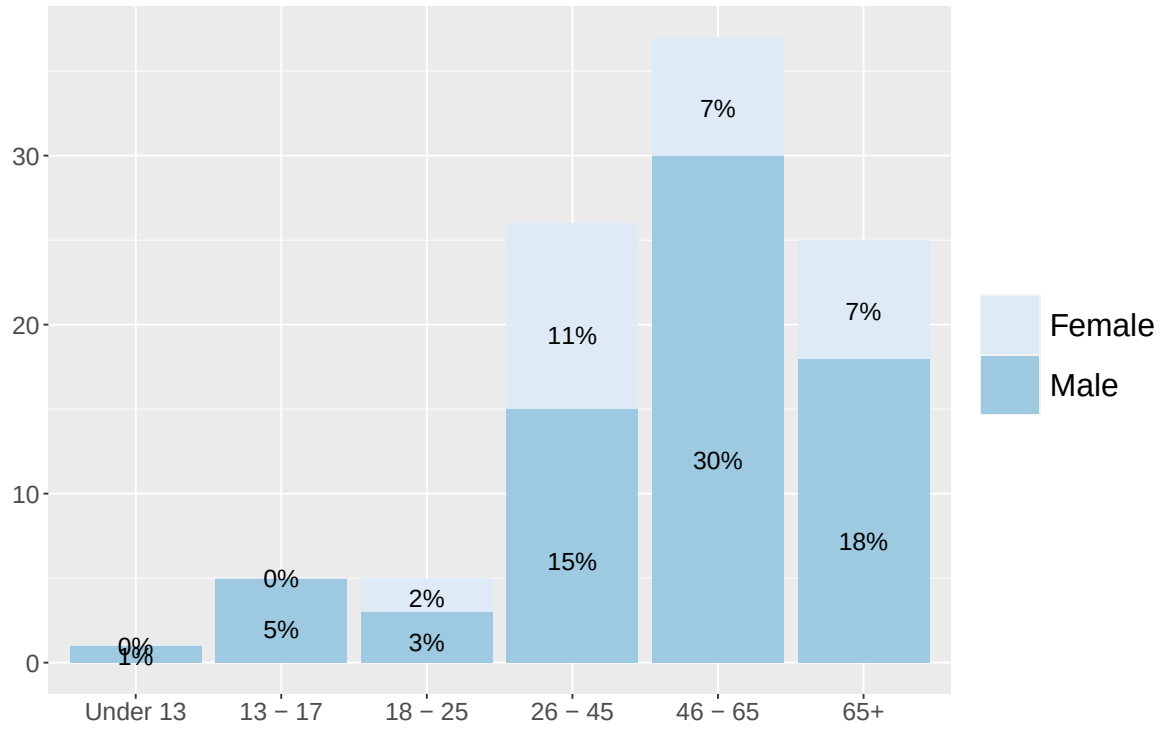

Figure 11: Bar chart of gender and age. Some options have been omitted

The combination of gender and age in Fig. 11 illustrates that there are no girls in the under age groups. The 18 – 25 bracket is less populous for both genders, which could be explained by newly

acquired driver's licenses. The strongest female participation is in the 26 – 45 age group, whereas the vast majority of male cyclists among the participants was in the 46 – 65 bracket.

6 $Q5$ - If you have any other thoughts, please let us know

74 of the 176 successful survey responses included a response to this question. There were x distinct themes the comments mentioned:

- 7 comments were of a general nature, such as giving reasons why the person does not cycle or that the person doesn't want to be considered for prizes.
- Three comments were positive about ERRs, projecting ERRs will help promote cycling. Two of these people feel ERRs encourage them to ride or to let their children ride on the streets.
- 11 comments are negative about ERRs,
  - seven of them based on safety concerns (high vehicle speeds, narrow space between parked cars), and
  - six find the ERRs impractical as the network is small and does not lead to the desired destinations.
- Some respondents have specific comments about individual ERRs.
  - One wishes for more East-West routes.
  - One respondent would like to have a cycling lane on arterials instead to avoid detours.
  - Two comments point out the difficulty of crossing arterials when the ERR runs across it and ask for signalled crossings.
  - One comment draws attention to the urgency of completing ERRs in central Box Hill before large high rises are built in their way.
- Six respondents point out that ERRs aren't publicised enough.
  - They did not know what the painted bicycles were about or what a sharrow is, and would like a map of the ERR network.
  - One person thinks there should be signposts in addition to ground markings to explain the rules.
- 22 comments touch on infrastructure.
  - 16 of them specifically mention bike lanes, and
  - 8 of them emphasise the need to prohibit parking on bike lanes.
  - Many mention safety, which is seen as a show stopper in cycling uptake.
  - Having to dodge parked cars is recognised as a major safety issue.
  - Many people comment on connectivity, having to take detours, or cycling paths disappearing unexpectedly, mostly at intersections.
- Several people mention driver behaviour and attitudes, and some believe education would be the answer.
- Six responses comment on WCC being behind other councils with regards to promoting cycling, safe infrastructure, educating drivers about cyclists, and the development of fast routes for cyclists.

- Individual comments point out that Melbourne cycling paths are the best in Australia.
- Two people think they should be allowed on the footpath.
- One person states that stricter rules should be imposed on under 12-year-old cyclists when cycling on the footpath.
- One cyclist feels that chicanes are stressful.
- One person asks for a 'cyclist green' - giving cyclists a head start on intersections.
- One comment repeats the fallacy that cyclists, who are dangerous, don't pay for roads and therefore deserve no infrastructure.
- Another feels there is a need to take the time to teach other people to run errands without a car.

7 Correlations

The Kaiser-Meyer-Olkin test result for the survey data was 0.38, which means the data is not suitable to be analysed using factor analysis. We examined the correlations between individual questions and answers, shown in Fig. 12. The variables are categorical and binary, hence positivity/negativity have to be considered in the context of the numbering of choices. For binary and categorical variables, polychoric correlations are appropriate.

Correlation strengths:

- 0.7 to 1 – very strong
- 0.5 to 0.7 – strong
- 0.3 to 0.5 – moderate
- 0 to 0.3 – weak

The correlation plot shows no correlations of type very strong, a few strong correlations and many moderate correlations. The strongest correlations are listed in Table 3.

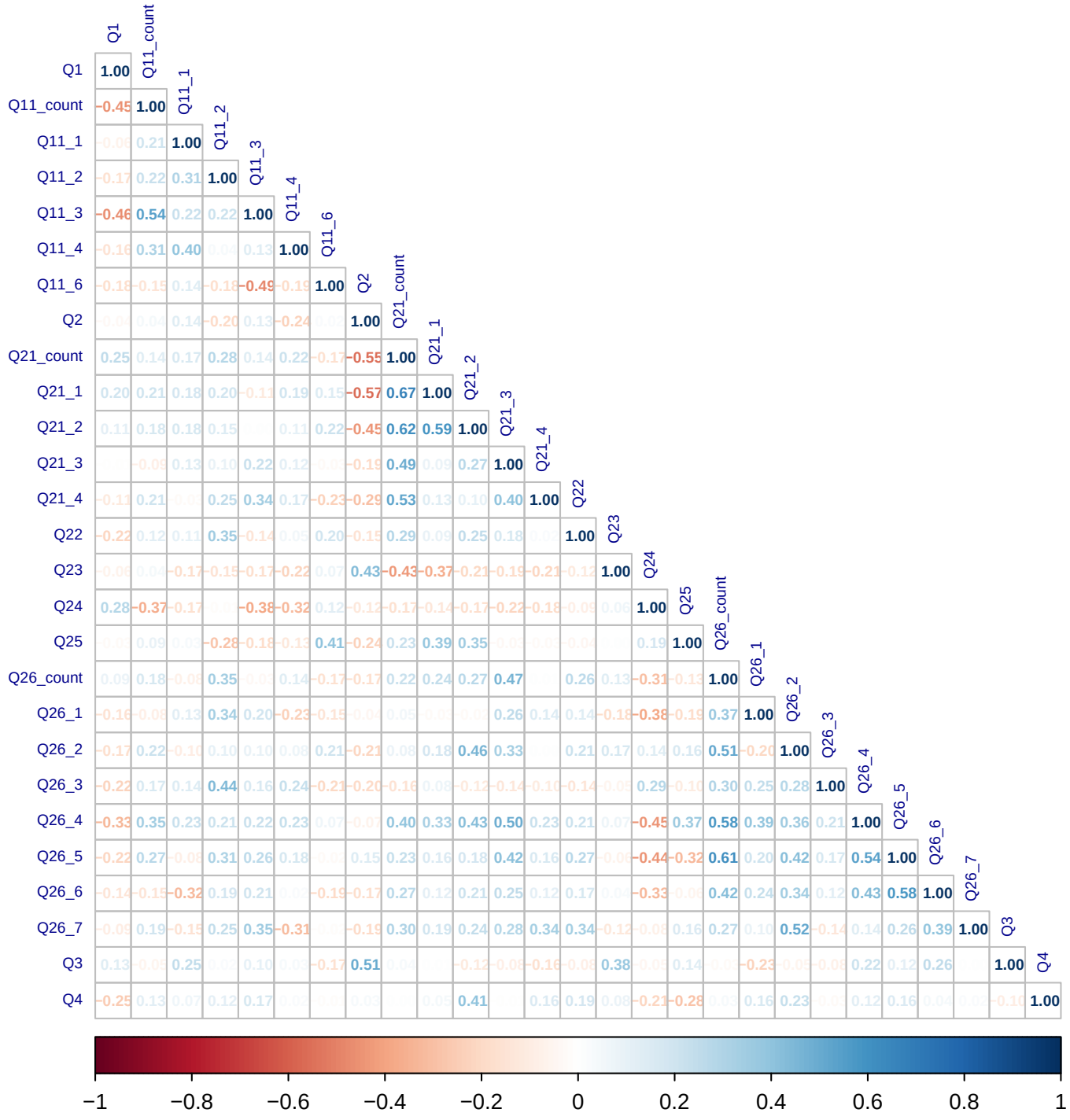

Figure 12: Polychoric correlations between answers

Table 2: Keys to correlations plot (Fig. 12). Variables are either categorical or binary

Code	Variable	Explanation
Q1	cat	City of Whitehorse have introduced ERRs (easy ride routes) for cycling. Have you noticed these when driving? Numbers 1 – 4 denote the answer choices
Q11_count	cat	How many of the possible (multi-choice) items did a respondent choose to question 11?
Q11_1	bin	Did a respondent choose answer "I try to avoid driving on streets with bicycle signage/ERRs", true/false
Q11_2	bin	Did a respondent choose answer "I drive more slowly on streets with bicycle signage/ERRs", true/false
Q11_3	bin	Did a respondent choose answer "I look out for cyclists when driving on streets with bicycle signage/ERRs", true/false
Q11_4	bin	Did a respondent choose answer "I give cyclists priority when driving on streets with bicycle signage/ERRs", true/false
Q11_6	bin	Did a respondent choose answer "Not really", true/false
Q2	cat	How often do you ride a bicycle? Numbers 1 – 5 denote the frequency choices
Q21_count	cat	How many of the possible (multi-choice) items did a respondent choose to question 21?
Q21_1	bin	Did a respondent choose answer "Commute", true/false
Q21_2	bin	Did a respondent choose answer "Errands", true/false
Q21_3	bin	Did a respondent choose answer "Recreation", true/false
Q21_4	bin	Did a respondent choose answer "Exercise", true/false
Q22	cat	How long are your trips on average? Numbers 1 – 6 denote the answer choices
Q23	cat	How confident a cyclist are you? Numbers 1 – 4 denote the answer choices
Q24	cat	City of Whitehorse have introduced ERRs (easy ride routes). How important are they to you as a cyclist? Numbers 1 – 5 denote the answer choices
Q25	cat	Do you feel safer when cycling on ERRs compared to similar streets? Numbers 1 – 3 denote the answer choices
Q26_count	cat	How many of the possible (multi-choice) items did a respondent choose to question 26?
Q26_1	bin	Did a respondent choose answer "40km/h speed limit", true/false
Q26_2	bin	Did a respondent choose answer "30km/h speed limit", true/false
Q26_3	bin	Did a respondent choose answer "Speed humps", true/false
Q26_4	bin	Did a respondent choose answer "Don't allow parking on bike lane", true/false
Q26_5	bin	Did a respondent choose answer "Dedicated bike lane", true/false
Q26_6	bin	Did a respondent choose answer "Divider between bike lane and car lane", true/false
Q26_7	bin	Did a respondent choose answer "Removing car through traffic", true/false
Q3	cat	What is your gender? Numbers 1 – 4 denote the answer choices
Q4	cat	What is your age? Numbers 1 – 7 denote the answer choices

Table 3: Notable correlations

Codes	Strength	Explanation
Q21_1 – Q21_2	0.59	People who use bicycles for errands also use them for commuting.
Q26_5 – Q26_6	0.58	People who feel safer on a dedicated cycling lane also feel safer when it has a divider.
Q26_4 – Q26_5	0.54	People who feel safer on a dedicated cycling lane also feel safer without parking on the cycling lane.
Q26_2 – Q26_7	0.52	People who would feel safer under a 30km/h speed limit also think removing through traffic would make them safer.
Q2 - Q3	0.52	There is a strong correlation between gender and riding frequency. From "daily" to "several times a month" the majority are male. "Every few months" and "Never" females are in the majority.
Q21_3 – Q26_4	0.50	There is a strong correlation between cycling for recreation and asking for no parking on cycling lanes.
Q24 – Q26_4	0.45	People who know and use ERRs are more likely to feel safer when parking is prohibited on cycling lanes.
Q24 – Q26_5	0.44	People who know and use ERRs are more likely to feel safer on dedicated cycling lanes (with a divider (0.33)).
Q11_2 – Q26_3	0.44	People who report driving more slowly on ERRs are more likely to favour speed humps.
Q2 – Q23	0.43	There is a moderate correlation between riding frequency and confidence.
Q21_3 – Q26_5	0.42	Recreational cyclists are most likely to feel safer on a dedicated cycling lane.
Q21_2 – Q26_4	0.42	People who cycle for errands have higher preference for no parking on cycling lanes (0.42) than commuters (0.33).
Q11_6 – Q25	0.41	The safer people feel on ERRs, the less likely they are to change their driving behaviour on ERRs.
Q21_2 – Q4	0.41	There is a moderate correlation between age and riding for errands. 58% of people who use bicycles for errands are above 45 years old.
Q21_1 – Q25	0.39	People who commute by bicycle are more likely to feel safe on ERRs.
Q23 – Q3	0.38	There is a moderate correlation between gender and confidence.
Q21_1 – Q23	0.37	The correlation between commuting and riding frequency is moderate.
Q25 – Q26_4	0.37	The safer cyclists feel on an ERR, the less likely they are to say that removing parking would make them feel safer.
Q21_2 – Q25	0.35	People who run errands by bicycle are more likely to feel safe on ERRs.
Q11_count – Q26_4	0.35	The more ways people change their driving behaviour, the more likely they are to feel safer without parking on cycling lanes.
Q11_2 – Q22	0.35	The longer people's cycling trips, the more likely they are to drive slowly on ERRs.

7.1 Gender and Confidence

Many sources report that the perceived danger of cycling is holding women back. The moderate 0.38 correlation between confidence and gender was investigated further:

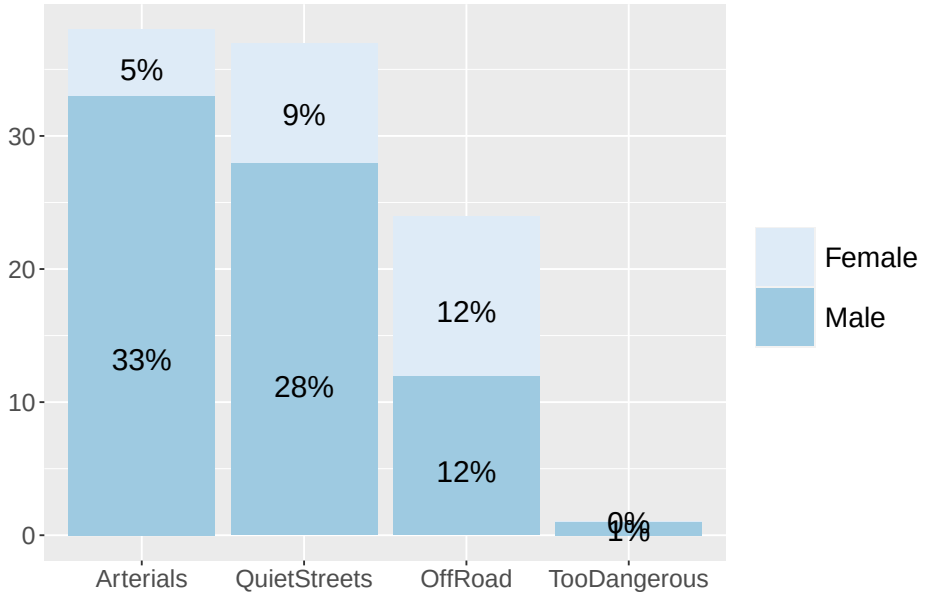

Figure 13: Bar chart of gender and confidence

Only 5% who reported cycling on arterials are women, 33% are men. The majority of women opt for off-road paths.

8 Conclusion

WCC intends the ERRs as a way of directing cyclists away from heavy traffic, 'to make cycling to work or to the shops safe and comfortable'. Drivers are 'encouraged to be aware of people on bikes' and cyclists are encouraged 'to claim the lane'. [1] The signage has no legal standing and relies on the goodwill of drivers and the luck of cyclists to encounter only capable and cooperative drivers. Awareness of the ERRs among both groups is crucial not only for the success of ERRs but the avoidance of death and serious injury. As the survey has shown, only 28% of cyclists know when they are driving on an ERR. Chances are this is even lower among people who do not cycle. Anecdotal evidence (personal communication with cyclists in the Whitehorse area) has shown that cyclists get honked at on ERRs. The fear of the wrath of drivers runs deep – a respondent notes that we should not impose lower speed limits because drivers would not like it.

In view of this, it comes as no surprise that cyclists overwhelmingly agree on the need for a properly separated, dedicated cycling lane that does not allow parking, in conjunction with crossings over busy streets. Given the predominance of cyclists among respondents and the fact that only 1% of respondents say they do not ride in Whitehorse for the danger, it is unlikely we have captured the 'interested but concerned' type of cyclist very well, which has been found to make for 78% of 'cyclists' [6].

Given that 75% of respondents feel at least 'a little' safer on ERRs, it appears they are worth developing. However, with the signage having no legal status, the confidence riders put in them may be ill informed and dangerous. A false sense of security can put riders at risk. The 'there is no space'

argument WATAG has heard from WCC transport engineers is a moot point in a world where cars grow at the pace of 1cm every second year.

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