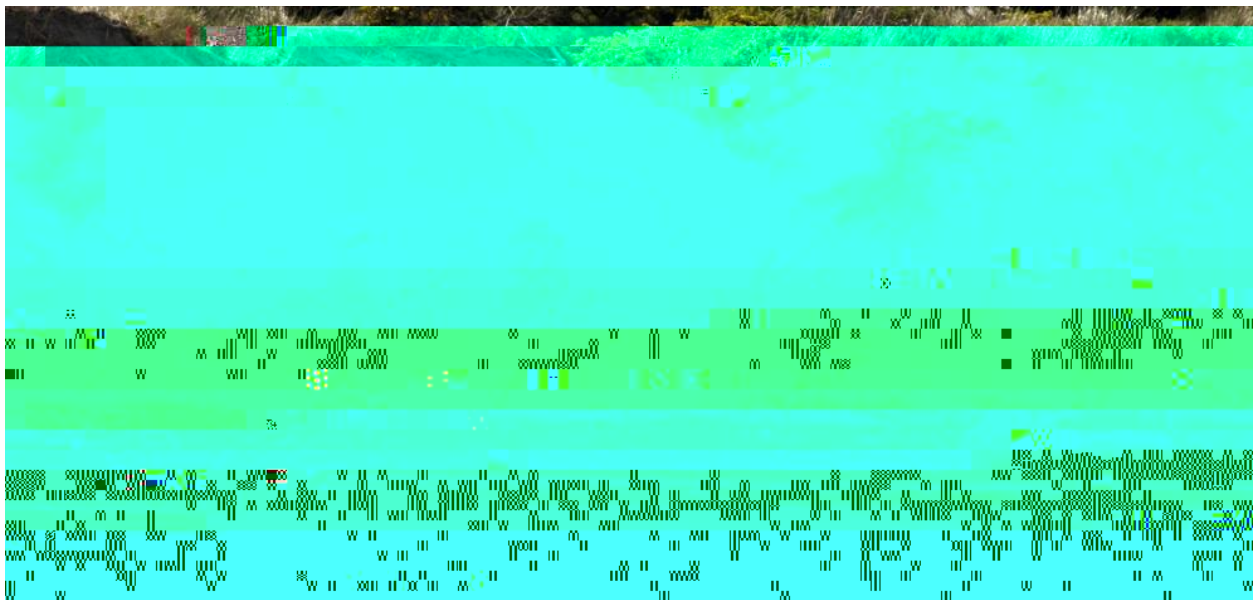


Reducing Dog Disturbance to Wildlife

What strategies are effective to encourage responsible dog owner behaviour to protect bird life?



UNIVERSITY OF CANTERBURY

GEOG309 Research for Resilient Environments and Communities

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Executive Summary

Coastal areas are essential in New Zealand for a range of activities such as supporting wildlife habitat, environmental processes and recreation. The Avon-Heathcote Estuary is an important coastal area located off the east coast of Christchurch in the South Island.

As the Avon-Heathcote Estuary edge is accessible to the public by walkers and dogs, birds inhabiting the estuary tend to be disturbed by dogs which reduces breeding success.

Working with the Avon-Heathcote Estuary Ihutai Trust and the Christchurch City Council this report aims to determine if signage is effective to encourage responsible dog owner behaviour to protect birdlife.

Due to concerns from Mana Whenua, the research process had to be adapted in the location context. This research aims to gather information from wider areas concerning dog owners and dog walkers and apply these findings to the Avon-Heathcote Estuary.

Dog walkers and owners around Christchurch were surveyed in person and online to collect qualitative and quantitative data.

Signage that was clear, concise and respectful was found to be the most effective at encouraging responsible dog owner behaviour.

Limitations included prestige bias, lack of diversity between participants, and research locations.

Future research should seek perspectives from wider demographics to increase the reliability of findings and test other strategies such as educational activities and advertisement campaigns.

Avon-Heathcote Estuary
Introduction
Background
The Avon-Heathcote Estuary serves as an essential habitat for many native New Zealand shorebird species. There are concerns that dog walkers are not following the bylaws in the Avon-Heathcote Estuary. The Christchurch City Council Parks Unit is in the process of designing signage to be used in the area in hopes of reducing dog disturbance and protecting bird populations. Our research process was adapted away from the Avon-Heathcote Estuary and instead conducted at parks around Christchurch to comply with concerns from Mana Whenua.

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Estuaries, river mouths and beaches serve as important wintering grounds where shore birds congregate to feed in the intertidal zones and prepare for migration (Bar g rat plM sage)



used to determine the effectiveness of compliance and responses to dog bylaws. Surveys and interviews explored perceptions of alternative strategies to protect birdlife from dog disturbance.

Literature Review

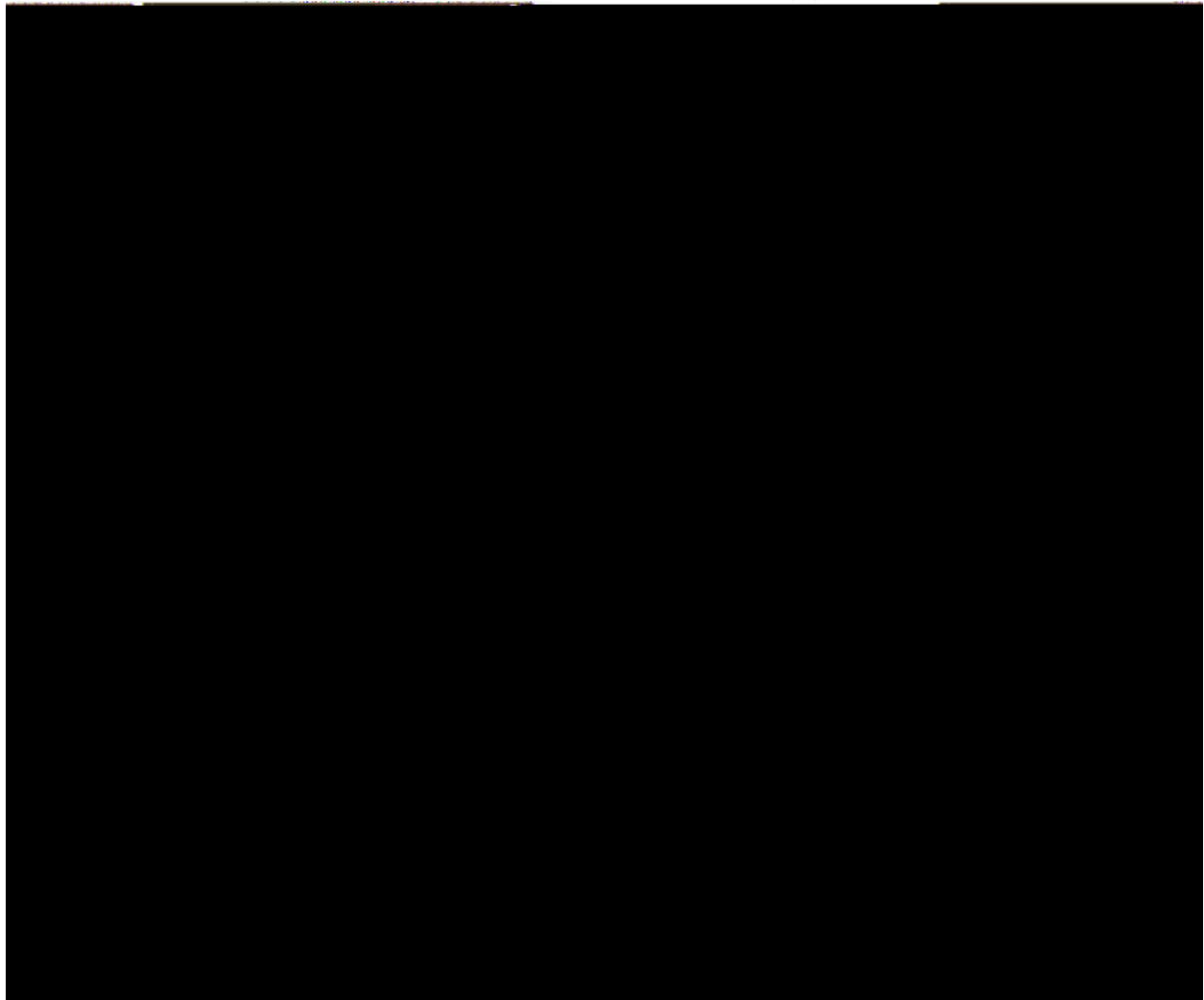
Literature reviews were conducted on five relevant sub-themes to assess current literature and understanding of strategies that could target dog owner behaviour. These reviews identify key themes and strategies to incorporate within the research process to protect the vast range of birdlife li e

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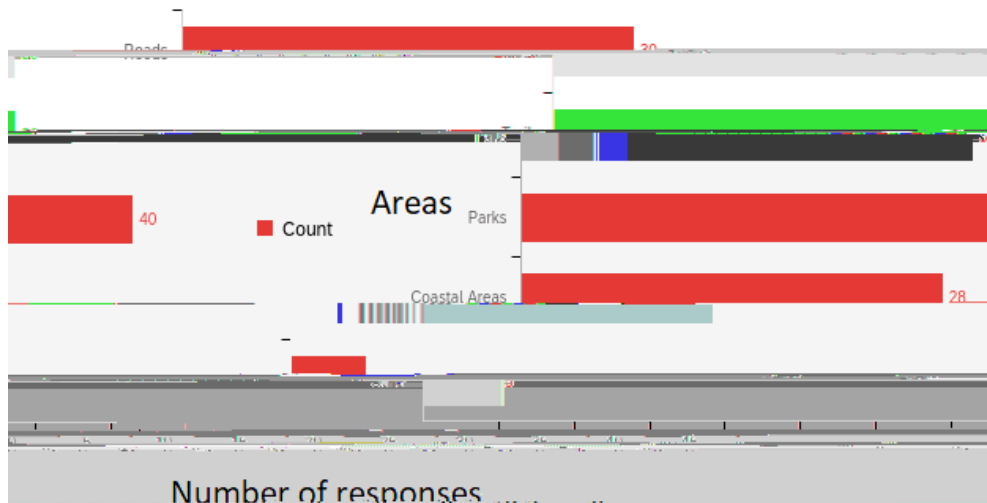
The second section was aimed at investigating the participants' current understanding of bylaws and their behaviours. These questions were worded to encourage honest answers. Section two explored the level of understanding dog owners and walkers have about regulations and whether regulations are effective enough to ensure compliance. The research assesses social pressure or influence from other dog owners or walkers that could influence the participants in compliance or non-compliance to bylaws.

The third section examined participants' ideas on other strategies for promoting positive dog owner behaviour which could support signage. Responses from the target audience are important, providing information on the most effective initiatives and strategies.

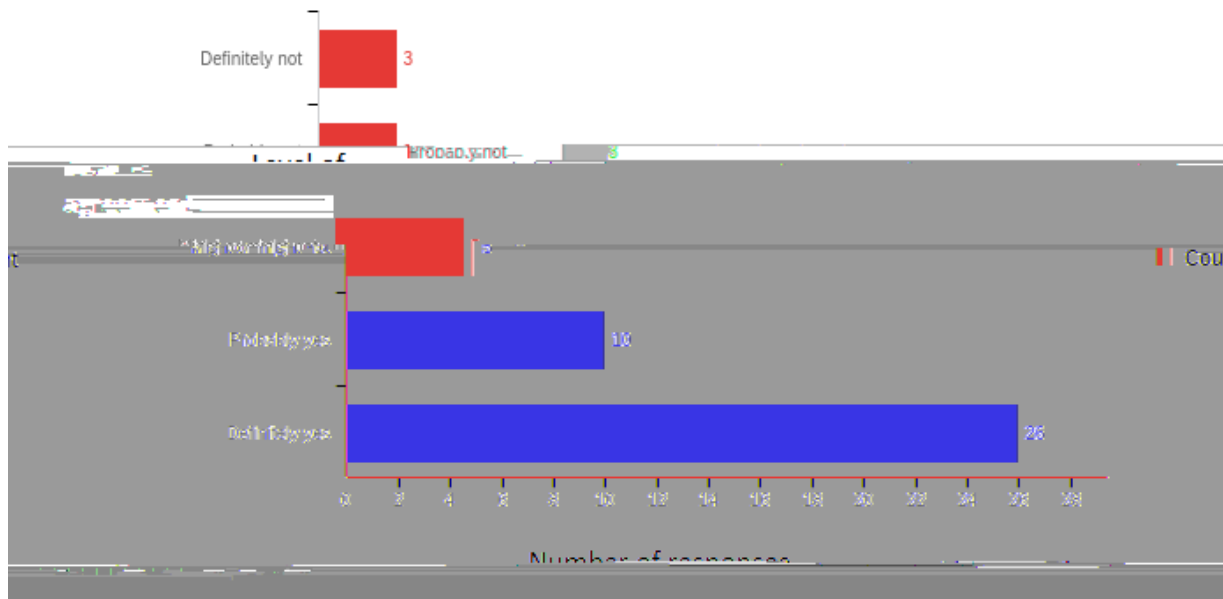
The final section was aimed at asking participants' thoughts on prototype signage. The Christchurch City Council supplied six different signs as pictured in Figure 2. This section aims to give insights into what important elements need to be present in creating effective signage.



The six prototype signs that survey participants were asked to rank in order of effectiveness.



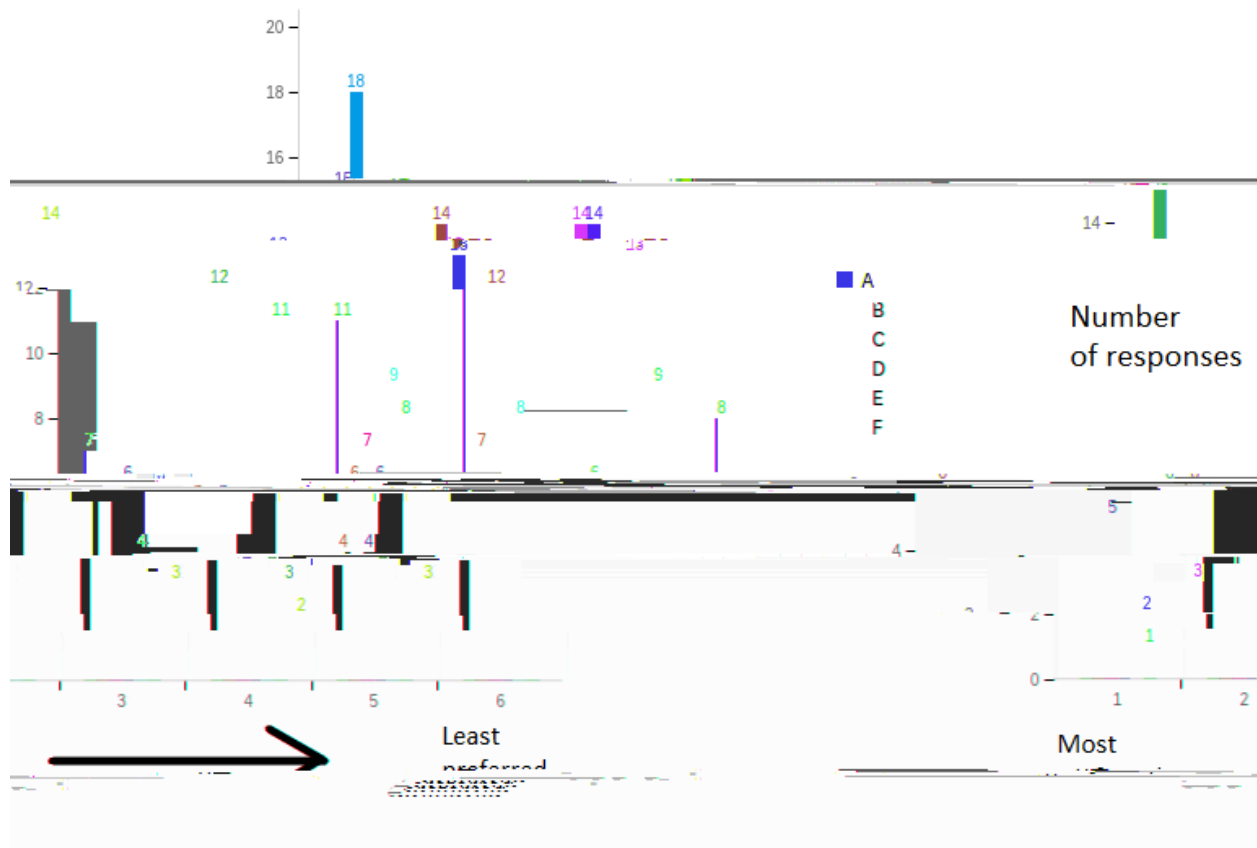
Survey output indicating what areas participants tended to walk their dogs.



The number of survey responses indicating how likely participants are to have seen signage regarding dogs in the places they walk their dogs.

Prototype Posters

Regarding participants' thoughts on the prototype signs, Figure 5 showed that the most effective sign that people would follow if seen while walking their dog was Sign C, and the least effective being Signs E and F, as pictured in Figure 2. Participants' reasoning for their first choice include that Sign C was 'eye-catching, clear and concise and showed authority while also being emotive and respectful'.



The prototype signs (A to F) ranked in the level of effectiveness at changing people's behaviour regarding dog behaviour.

The reasons for the least effective signs were that they were either anti-dog and/or disrespectful, sometimes confusing and unclear what the message was trying to be portrayed as. For example, participants mentioned that pictures on some signs made them look messy and did not make participants want to read what the sign said. Other responses stated that these signs just weren't interesting or eye-catching.

After splitting the responses into age demographic, 50% of participants aged 18-24 chose Sign D as the most favoured sign. This showed that the age demographic of dog walkers influenced what signage was preferred or more likely to be followed. This demographic's reasoning for this choice was contradictory to the reasoning for why other age groups did not like Signs E and F, considering Sign D was very similar in terms of pictures, colouring and text. One favourable response said, "it shows clearly what dogs do, chasing birds for fun. Some dog owners think this is ok because the dogs don't catch the birds. They don't realise the dog is bothering the birds." Whereas an unfavourable response commented, "The last 3 [D, E, F] I put are too busy people won't want to stop and find the info between the graphics."

Though the most favoured sign was dif

How likely the survey participants would

Stricter enforcement

References

- Bethlehem, J. (2010). Selection bias in web surveys. *Journal of Survey Research Methods*, 78(2), 161-188. <https://doi.org/10.1111/j.1751-5823.2010.00112.x>
- Bowes, M., Keller, P., Rollins, R., & Gifford, R. (2015). Parks, Dogs, and Beaches: Human-Wildlife Conflict and the Politics of Place. In N. Carr (Ed.), *Human-Wildlife Conflict and the Politics of Place* (pp. 146-171). London: Palgrave Macmillan UK.
- Burger, J., Jeitner, C., Clark, K., & Niles, L. J. (2004). The effect of human activities on migrant shorebirds: Successful adaptive management. *Journal of Field Ornithology*, 75(4), 283-288. <https://doi.org/10.1017/S0376892904001626>
- Christchurch City Council. (n.d.). Dog control policy and bylaw 2016. Retrieved October 12, 2022, from <https://www.ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/bylaws/dog-control-policy-and-bylaw-2016>
- Dit Durell, S.E.A.L.V., Stillman, R. A., Triplet, P., Aulert, C., dit Biot, D. O., Bouchet, A., Duhamel, S., Mayot, S., & Goss-Custard, J. D. (2005). Modelling the efficacy of proposed mitigation areas for shorebirds: A case study on the seine estuary, France. *Journal of Applied Ecology*, 42(1), 67-77. <https://doi.org/10.1016/j.biocon.2004.10.009>
- Donnelly, R. E., Prots, A., & Donnelly, C. A. (2021). Better educational signage could reduce disturbance of resting dolphins. *PloS One*, 16(4), e0248732-e0248732. <https://doi.org/10.1371/journal.pone.0248732>
- Dowding, J. E., & Moore, S. J. (2006). *Science for Conservation 261*. Wellington, Department of Conservation. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/sfc261.pdf>
- Edelblutte, É., Short Gianotti, A. G., & Connors, J. P. C. (2022). Perceptions, concerns, and management of white-tailed deer among municipal officials. *Journal of Environmental Management*, 312(5), 436-456. doi:10.1080/10871209.2021.1959963
- Fernández-Juricic, E., & Jokimäki, J. (2001). A habitat island approach to conserving birds in urban landscapes: case studies from southern and northern Europe. *Biodiversity and Conservation*, 10, 2023–2043.
- Figueiredo, L. (2020). Avon-Heathcote Estuary Ihutai Trust summer scholar research. <http://www.estuary.org.nz/f/45a1260657c7f16f.pdf>

Zhu, L., Davis, L. S., & Carr, A. (2021). A picture is not always worth a thousand words: The visual quality of photographs affects the effectiveness of interpretive signage for science communication. (Bristol, England), 30(3), 258-273.
<https://doi.org/10.1177/0963662520982535>

Appendix 1

We are from the University of Canterbury and we are working with the Avon-Heathcote Estuary Ihutai Trust to research if signage is an effective tool to encourage dog owner behaviour to protect bird life. We are trying to determine if the provided prototype signs by the City Council are fit for purpose. The research we are doing will result in a report for the Estuary Trust and CCC Parks Visitor Engagement Unit to recommend changes to existing and future signage and initiatives, to minimise conflict between dogs, their owners, and vulnerable wildlife species. As this is an anonymous survey it will not be possible to withdraw your information after you have completed the survey.

18-24 years old.

25-34 years old.

35-6.

