



Waimakariri Braided River Birds

BRAid presentation of the work by CRC between 2008 - 2026



Waimakariri river

- Historically, the river was abused. A dumping ground for cars and trash.
- People don't know their shorebirds
- The focus of the river was flood mgmt., then recreation- Biodiversity and ecology work came later.
- So the work of rangers and parks team was to educate and develop
- *“The number of birds recorded on the Mid Waimakariri during the breeding season is nationally significant, representing 3.5-8% of the national population (Fink et. al 2025, O'Donnell and Monks 2011).”*



CRC activities

- Flood infrastructure
 - Maintenance
 - Weeding
 - New Infrastructure
- Waimakariri River Regional Park
 - Recreation management
 - Education
 - Support protection of scheme
 - Biodiversity enhancement





Tarāpuka/Black billed gull

Photographer: Glenda Rees



Monitoring history

- In the beginning...
 - Monitoring of BBG begins in 2008
- Not DOC? We're the landowner.
- Typical issues- limited funding and an easy target for cuts. Not a core project.
- On the smell of an oily rag
- Grew over time with things added like BFT 2021; Wrybill and Dotterel suggested in monitoring strategies- also crammed in.
- Huge thanks to Keystone for some tight-budget delivery for so long.



The review- Mike Bell and Court 2025

- The Waimakariri is really important for shorebirds
- for WMK- BFT faring better than elsewhere which is unusual.
- Flooding, People and BBG the biggest stressors
- Consistent with A. Schlesselmann's review as well.
- Recommends changes in our monitoring
- Reinforces value of walk-through surveys
- Reinforces value of guiding strategies; for us Wildlands river management plan (due for review) + SBBG WMK control strategy
- NB: a single river view of highly-mobile species gives only a partial view.

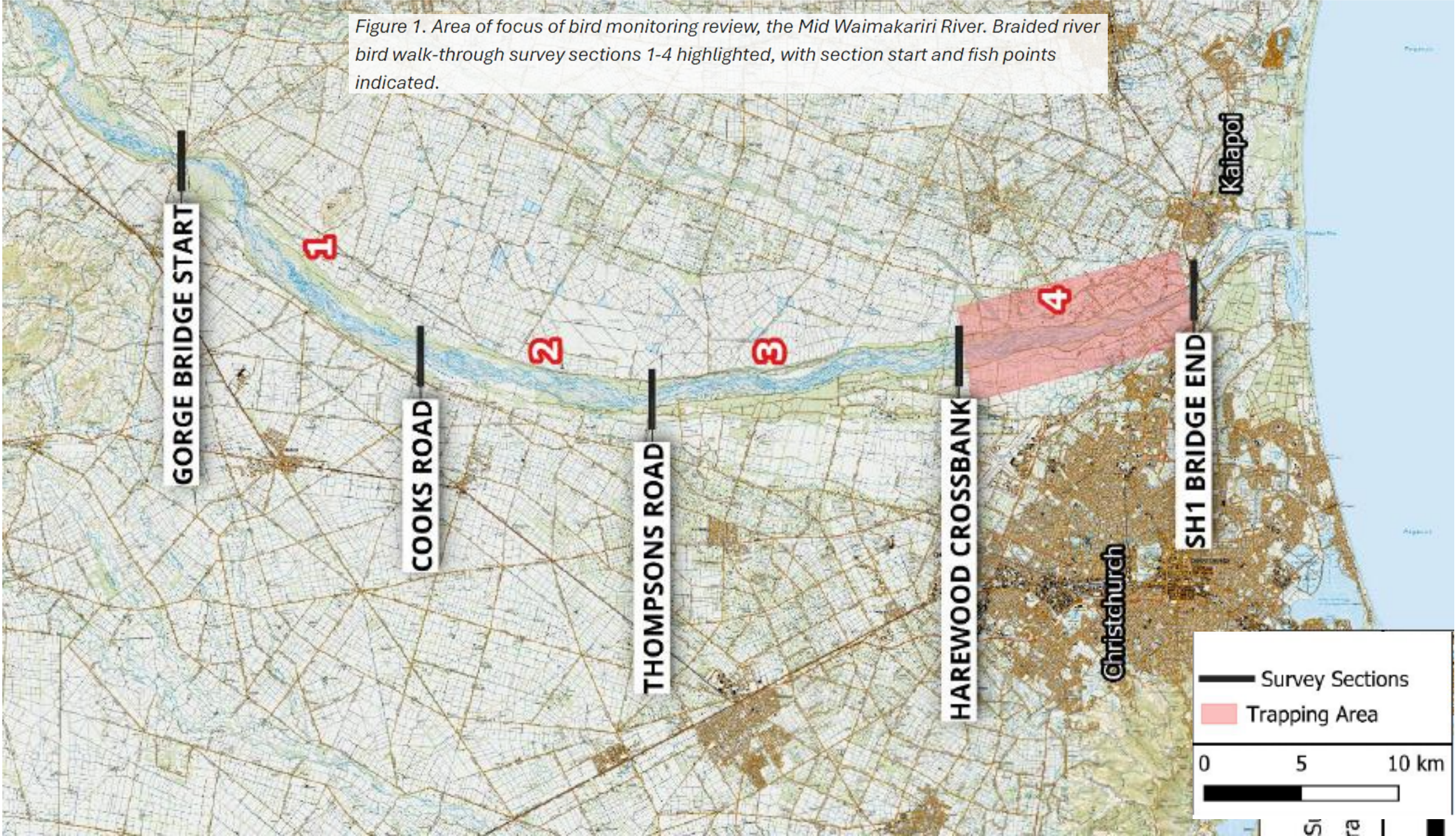
Review of Bird Monitoring undertaken on the Mid Waimakariri River



Bell, M. 2026. Review of Bird Monitoring undertaken on the Mid Waimakariri River. Contract report to Environment Canterbury, Toroa Consulting limited.



Figure 1. Area of focus of bird monitoring review, the Mid Waimakariri River. Braided river bird walk-through survey sections 1-4 highlighted, with section start and fish points indicated.



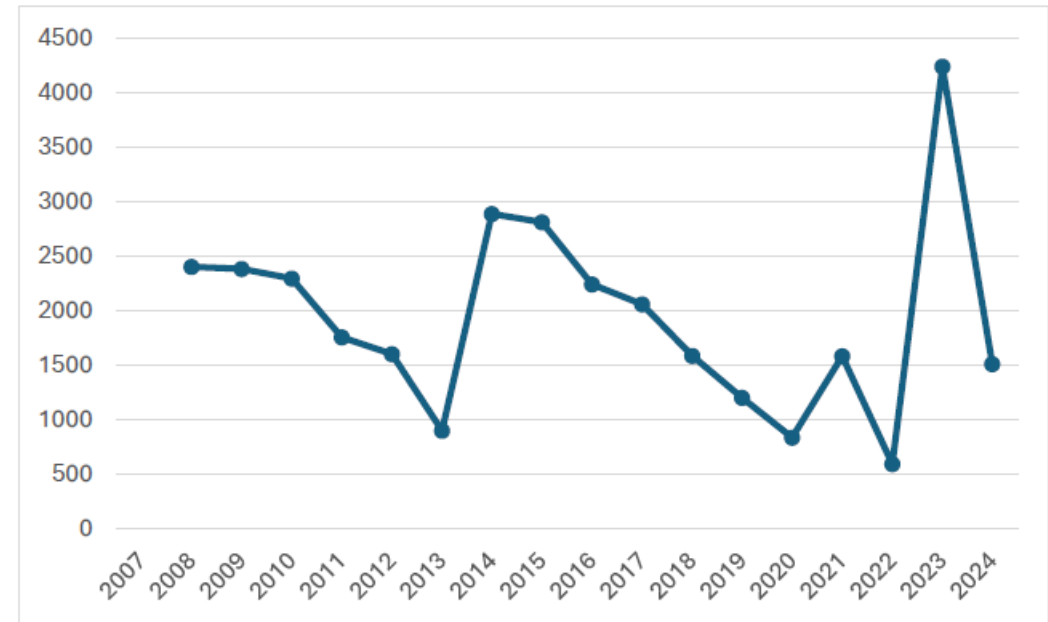


Population trends

- Overview of trend for BBG, BFT, Dotterels, Wrybills
 - BBG: a stable cyclical trend
 - BFT: an increase
 - Dotterel: mixed but more stable than national average.
 - Wrybill: a significant increase



Figure 2. The number of breeding pairs of Black-billed Gull recorded on the Mid Waimakariri River 2008-2024.



BBG - Tarāpuka population trend

- Cycling between 300 – 4500 breeding pairs since 2008
- The Waimakariri is supporting breeding BBG every year.

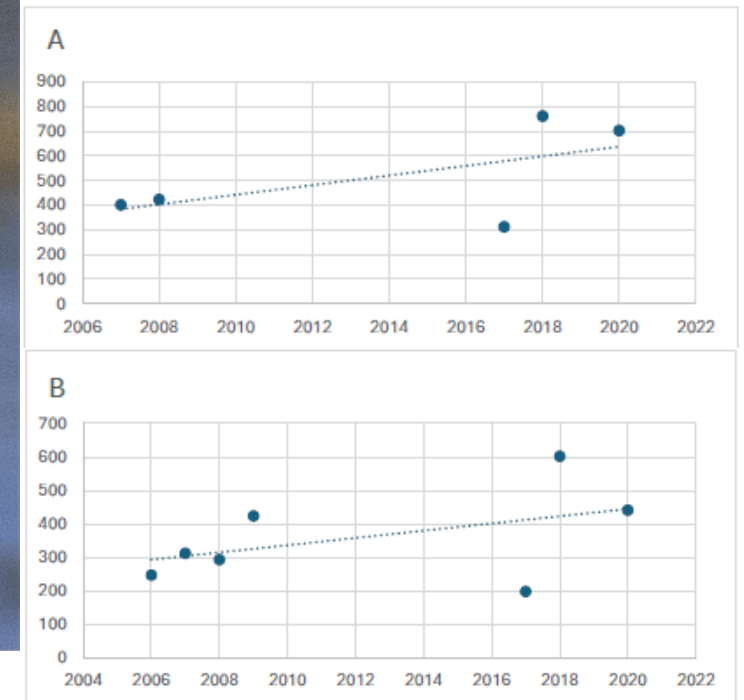


Photo: Steve Atwood

Tara population trend

- Tara are increasing in the different surveys.
- This is different to the declining trend nationally.
- The mid-WMK pop. Represents 3.5% - 8% of the national pop.

Figure 8. The number of Black-fronted Tern recorded on the Mid Waimakariri River during river surveys 2006-2020. A) Full surveys of all sections; B) Part surveys of section 1-3 to incorporate data from years when full surveys were no possible.

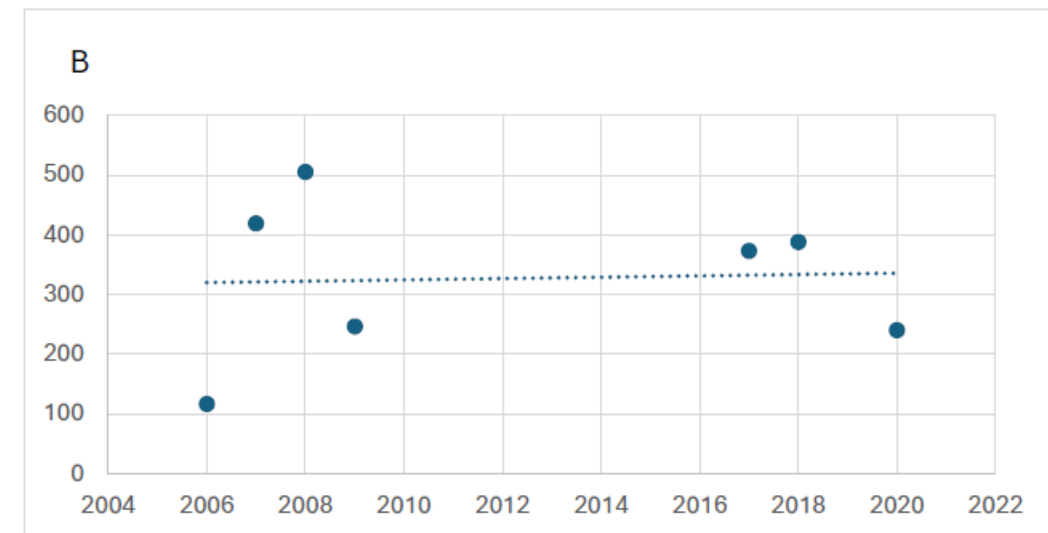
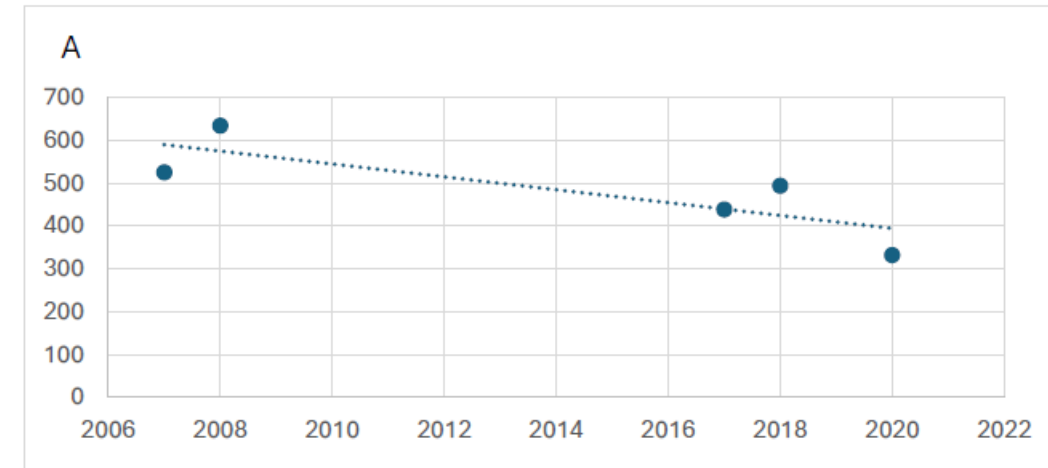


Dotterel population

A smaller decline than national 3.7%



Figure 11. The number of Banded Dotterel recorded on the Mid Waimakariri River during river surveys 2006-2020. A) Full surveys of all sections; B) Part surveys of section 1-3 to incorporate data from years when full surveys were not possible.



Wrybill population trend

Significant increase – consistent with regional assessments (*Riegen and Sagar 2019*)



Photo: Grant Davey

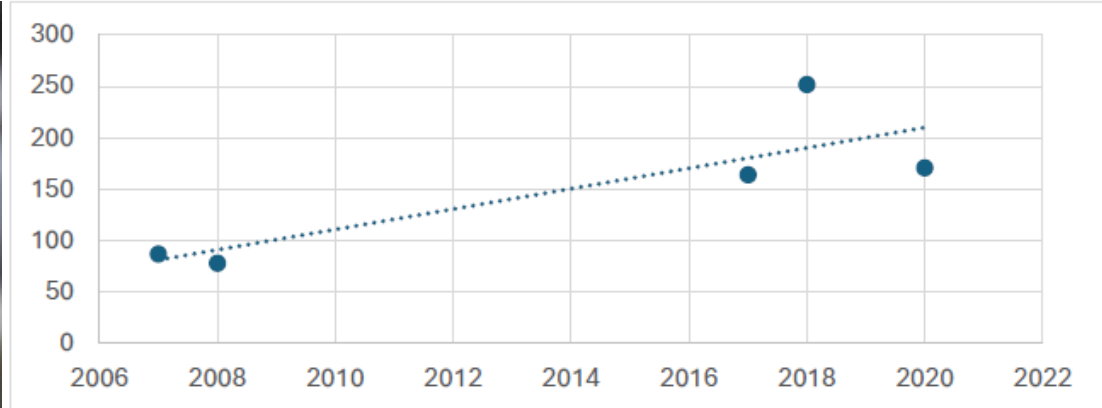
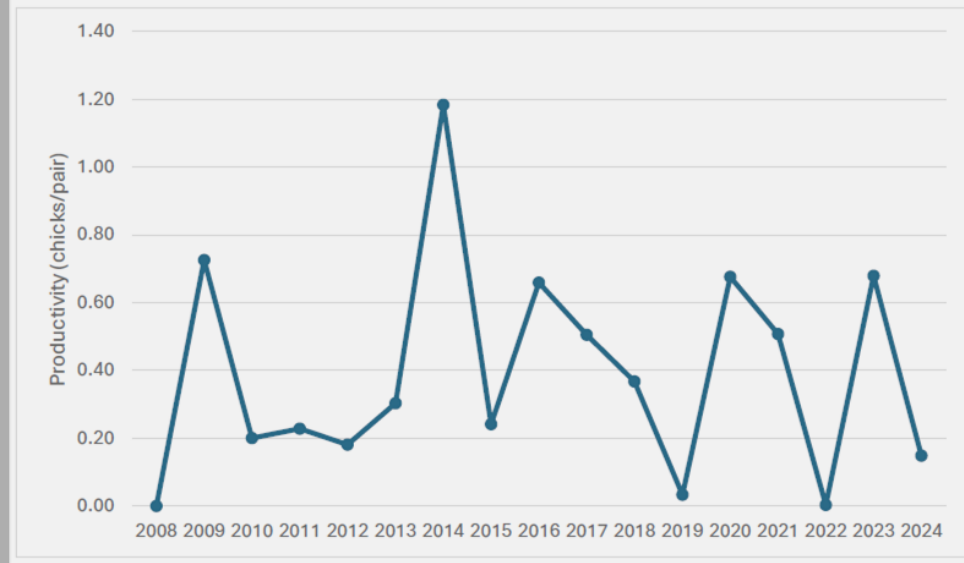


Figure 12. The number of Wrybill recorded on the Mid Waimakariri River during river surveys 2006-2020.

Figure 3. Annual productivity (chicks/pair) of Black-Billed Gull on the Mid Waimakariri River 2008-2024.



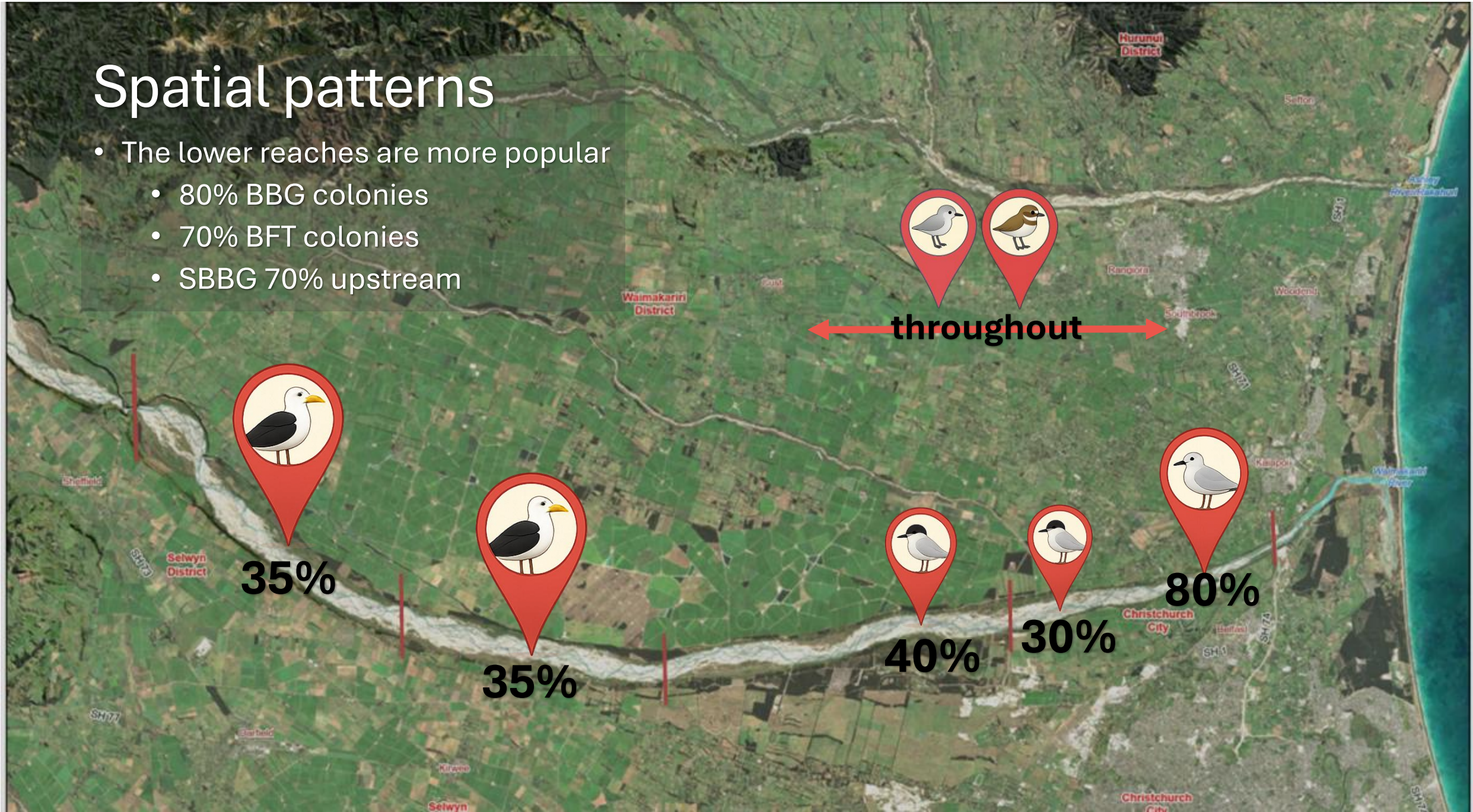
Productivity

- BBG: 0-1.18 (avg 0.39) chick fledged/pair
- BFT: 0.02-0.3 chick fledged/pair
 - at odds with increasing trend
 - (monitoring changes proposed)
- Dotterels: 0.16-0.83 chick fledged/pair
- Wrybills: 0.17-1.0 chick fledged/pair



Spatial patterns

- The lower reaches are more popular
 - 80% BBG colonies
 - 70% BFT colonies
 - SBBG 70% upstream



Flooding impacts

- Biggest recorded cause of nest failure
- Focus on habitat – higher island refugia

Figure 4. Black-billed Gull productivity (chicks/pair) in relation to the number of $>2.95\text{m}^3/\text{s}$ flood events each breeding season.

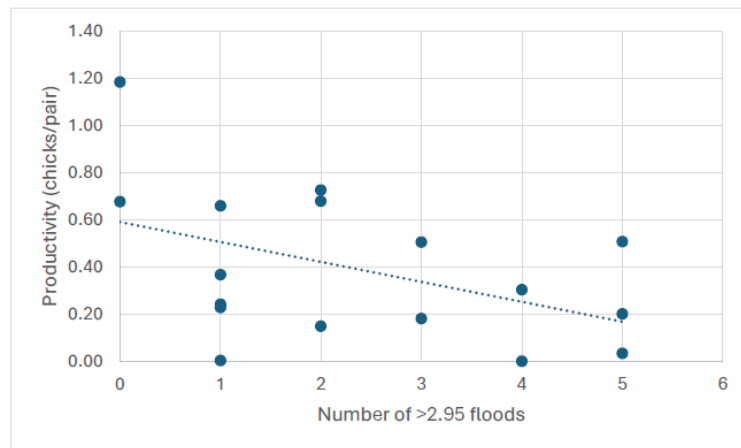
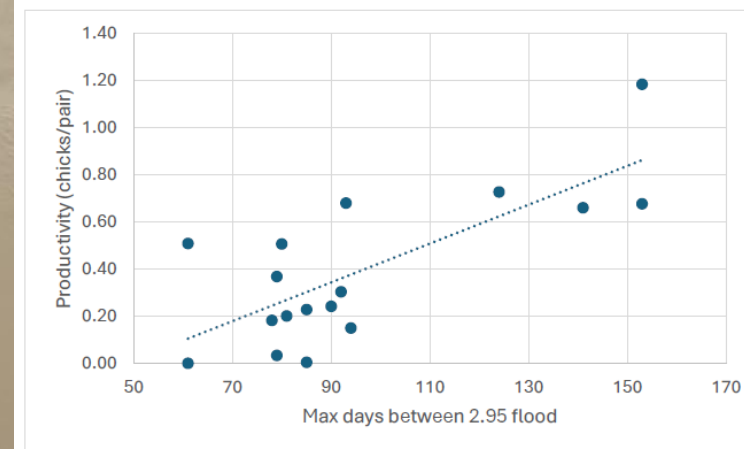


Figure 5. Black-billed Gull productivity (chicks/pair) in relation to the maximum number of days between $>2.95\text{m}^3/\text{s}$ flood events.



A photograph showing a person wearing a helmet and dark clothing riding a motorcycle across a field of large, grey rocks. In the foreground, a bird is perched on a rock. The background features a line of trees under a dark, overcast sky. The text 'Human impacts' is overlaid on the left side of the image.

Human impacts

- Significant on the Waimakariri
- Driving through colonies
- Destruction of nests
- Dogs in colonies
- Shooting at colonies
- Generally being too close
- Disturbance -> education; Persecution -> prosecution

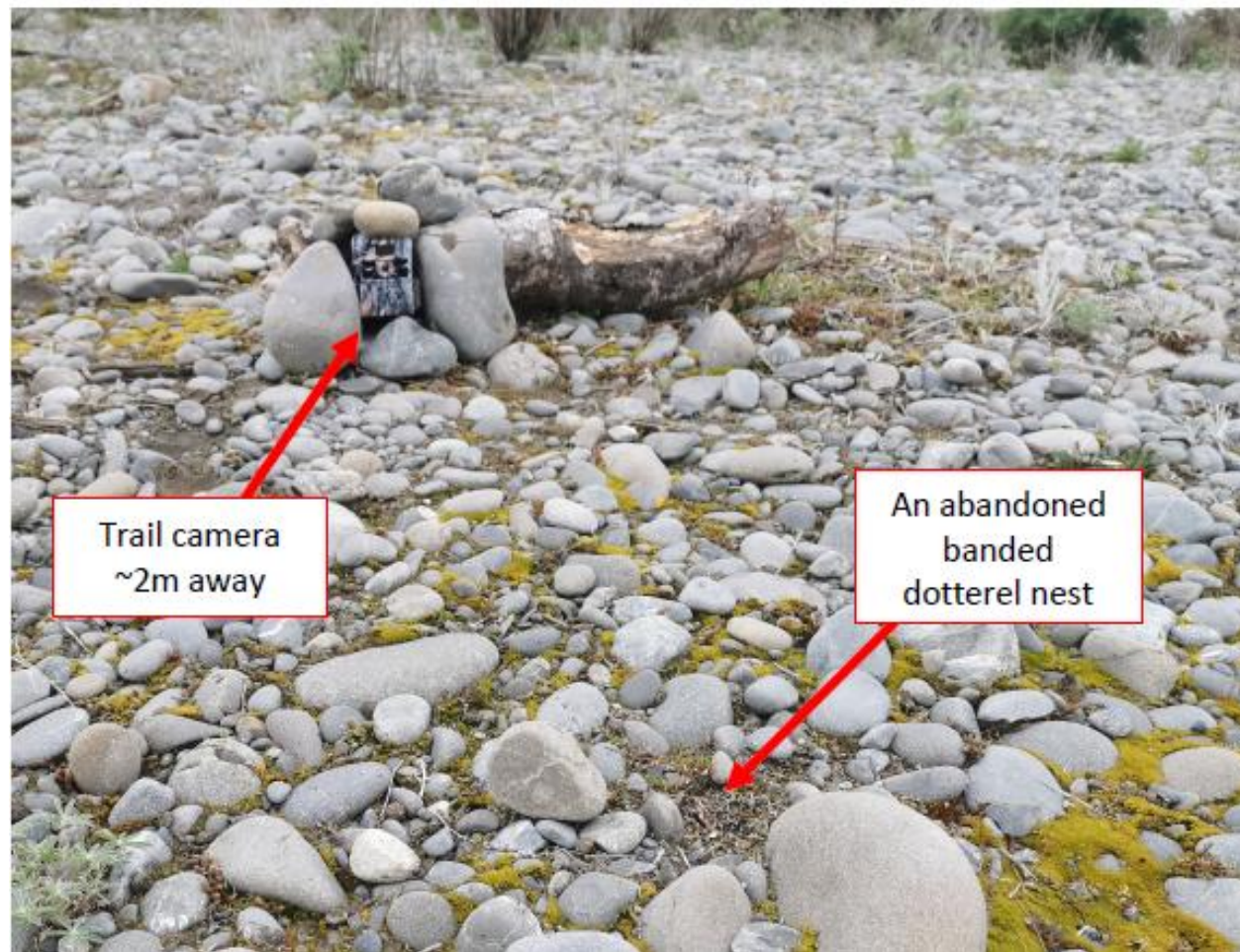


Courtney Bamber

Braided River Revival – Advisor

Monitoring effectiveness

- We are going to look to focus our monitoring on informing the actions again- focus on impact.
 - Increased sample sizes, more nests, higher frequency
- The recommendation is the prioritized monitoring of BBG, Wrybill and Dotterel and stopping BFT monitoring.
 - If we can find a funding boost to increase the sample size then this can be done
 - Walk-through surveys will still be monitoring these birds.



An example of a trail camera that was in the field to monitor a banded dotterel nest. –Thomas Smy, Keystone Ecology.

Advocacy and Publicity - WMK community group

- What exactly do we mean?
 - *“An independent group that could involve volunteers and seek funding, that we would work together with towards shared goals and plans.”*
- ARRG, Orari, NC F&B and others are excellent examples
- The Waimakariri is very open and accessible, meaning there are lots of ways in which people can participate- and do.
- The Waimakariri is big...!



The Island focus



- ID and then focus works on development of islands
- Great multi-value outcomes-obligate vegetation as well.
- Interesting interactions with BBG and others.



In Summary

- Keep building the dataset, including river walk-throughs
- Nationally significant
- Funding is tight and so much more could be done
- Big public opportunity
- Walk through surveys have been huge
- A WMK Rivercare group is missing and would be brilliant.