

Waiau Uwha River Bird Survey Summary 2024



Thanks to everyone who helped during the survey!

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The 2024 Waiau Uwha River Bird Survey

The Waiau Uwha River is known to be a habitat of outstanding significance for native river birds. It has been shown to support the northern-most known breeding population of wrybill (ngutu-parore | *Anarhynchus frontalis*), as well as internationally significant populations of black-fronted tern (tarapirohe | *Chlidonias albostrigatus*) and black-billed gull (tarāpuka | *Larus bulleri*), and a regionally significant population of banded dotterel (tūturiwhatu | *Charadrius bicinctus*). Surveying the river birds of the Waiau Uwha provides important information on the use of the river by these species, informs river management decisions, and guides agency resourcing of conservation activities.

This was the tenth year of surveying the Waiau Uwha river birds. In 1975 the sections from Twin Bridges to Sandersons Road were covered (today's sections 4-8). The 2008, 2009, 2010, 2016, 2017, 2018, 2022, 2023 and recent 2024 survey covered the river from Waterfall Stream to the river mouth, excluding sections 8-10 (**Figure 1**). As in 2018, 2022 and 2023, river bird counts were recorded against 89 one kilometre reaches, improving our understanding of the bird species spatial distributions. Undertaken in three-year blocks, the survey is scheduled to repeat every three to five years, and thus this is the last survey in this block.

Survey data will be shared with the local braided river bird advocacy group Braided River Aid (BRaid)¹, the Department of Conservation (who collates all braided river bird count datasets into a national dataset) and made accessible to the public via eBird². This survey was the third time we attempted to record all bird species observed along the river. This is to allow the bird counts to be considered 'complete' surveys and incorporated into a national ornithological atlas study via the public online platform eBird³.

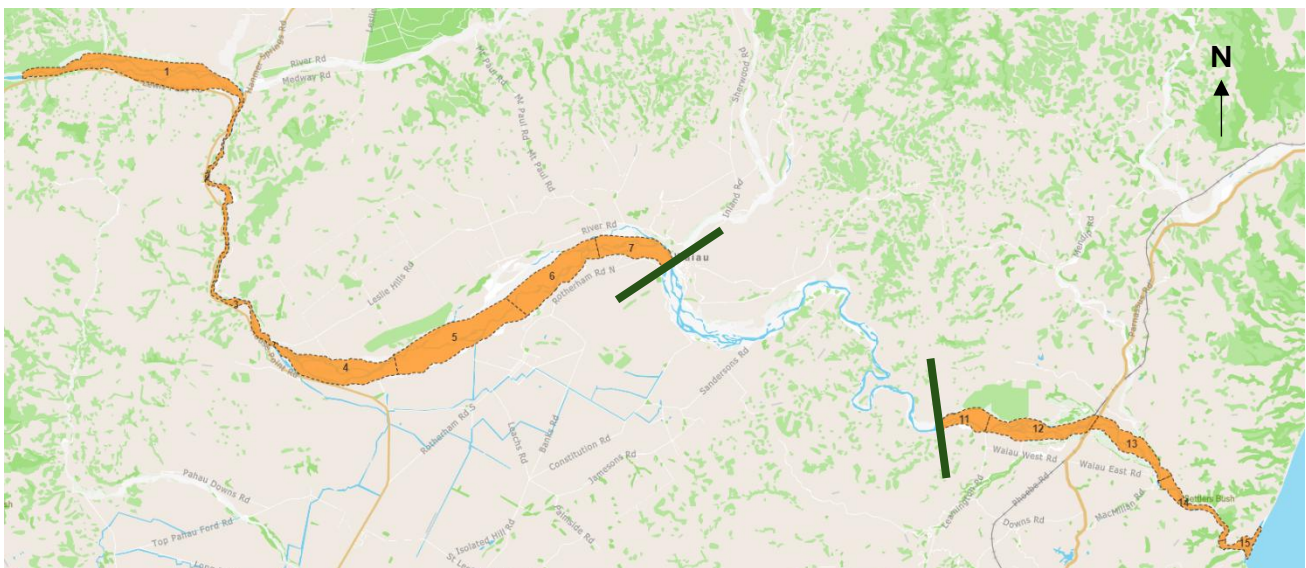


Figure 1. Map showing the locations of each section along the Waiau Uwha. Sections 8, 9 & 10 encompassed by green lines, KM47-71) were not surveyed in 2024. Sections 1-3 were surveyed on day 1, sections 4-7 on day 2 and sections 11-15 on day 4.

¹ [BRaided Rivers New Zealand – Braided River Aid](#)

² [eBird - Discover a new world of birding...](#)

³ The NZ Bird Atlas Project. See <https://ebird.org/atlasnz/home>

The 2024 Survey

The 2024 survey was scheduled to run over 4 days from the 19th to the 22nd of November. This aligns with best practise timing to conduct surveys between mid-October and early-December to align with the breeding season of river birds. However, inclement weather conditions prevented the 3rd day of surveying (KM 47-71, 21st Nov). Twenty-five surveyors assisted in the survey, making over 1,500 bird and breeding observations.

During the 3 survey days, weather conditions varied from overcast with a moderate breeze through to fine sunny conditions and at times showers and gusty winds. Noticeably the wind was moderate to high two of the three survey days. A large flood event occurred 23 days prior to the lead up of survey (~1000m³/s), which would have displaced many nesting birds, however flows dropped in the subsequent days prior to the survey. Within 10 days prior to the survey, the highest flow recorded was ~200m³/s. During the survey, river flows were similar compared to recent years; recorded as 65-90m³/s

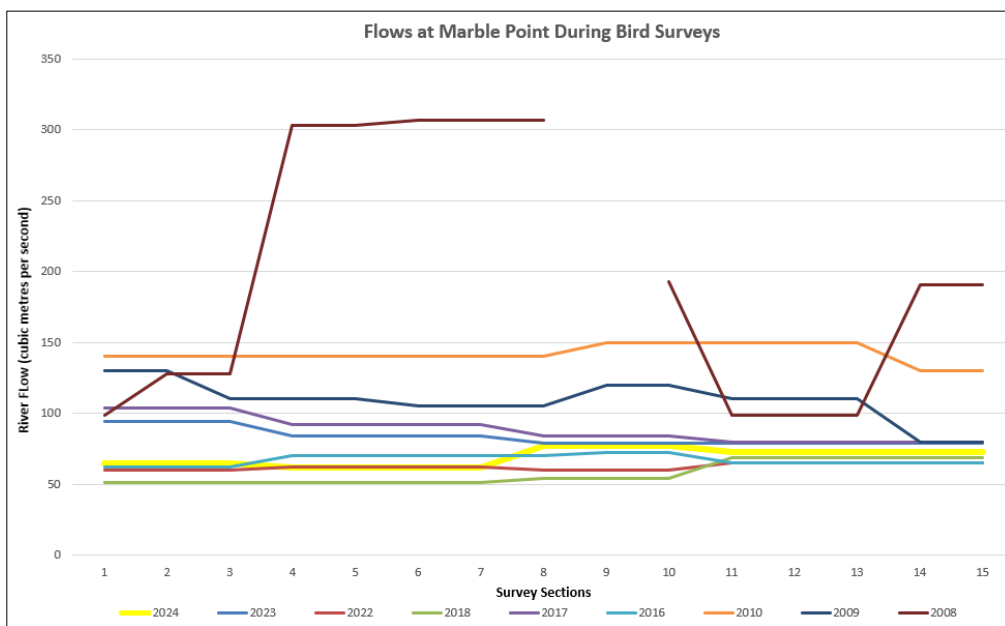


Figure 2: Flows at Marble Point during bird surveys on the Waiiau Uwha. Note. In 2008, adverse weather conditions resulted in survey sections being undertaken across non-consecutive days from mid-October to late November.

at the Marble Point gauge (Figure 2 & 3).

Key Observations from 2024

- Survey conditions were fine for surveying. River levels were low with the survey being delayed due to a flood a month prior. Moderate to gusty winds on 2 of the 3 days did not result in low counts of birds this year.
- Total counts of native gulls remained consistent for the Southern-black backed gull but lower for black-billed gulls with only 1 small colony found along the Waiau Uwha compared to previous years.
- Total count numbers of black-fronted terns were comparable to previous years and higher than found last season.
- Total numbers of banded dotterel remain similar to last years counts but lower than all previous monitoring years. Small numbers of wrybill still use and breeding on the Waiau Uwha river.

Survey extent and data comparisons

As mentioned above, the 2024 Waiau Uwha survey was a partial count, as sections 8, 9 & 10 were not surveyed due to the weather. To factor this into the comparisons, in this report we have omitted sections 8, 9 & 10 (KM47-71) from previous years' surveys. Hence, the counts of river and non-riverine birds in tables 2 & 3 are not the full complete count for the whole river as some sections have been removed.

The sections missed in the 2024 survey typically have large colonies of Southern Black-backed gulls | karoro (835 in 2018, 478 in 2022 and 1,005 in 2023). In 2018, there was also a large black-fronted tern | tarapirohe colony (835). High numbers of banded dotterels | tūturiwhatu have been observed in the past (277 in 2018, 122 in 2022 and 66 in 2023), but there is usually no wrybill | ngutu-parore present. SIPO | tōrea, pied stilts | poaka and spur-winged plovers are usually present in similar abundances to other sections. In terms of non-riverine species, the section usually has relatively high numbers of Canada goose | kuihi, and passerine species such as chaffinch, fantails, goldfinches and welcome swallows.

Looking at the overall results of the 2024 survey (**Figure 3**, braided river breeding bird counts increased compared to 2023, while gull counts were lower, and counts of exotic species increased. Both species of gull were lower compared to previous counts, although this is highly dependent on whether colonies are present or not (see **Attachment 1**, distribution maps). Solitary nesting and wading braided river birds (banded dotterel | tūturiwhatu, wrybill | ngutu-parore, South Island pied oystercatcher | tōrea and pied stilt | poaka) were overall higher than previous average counts (hotspots shown in **Figure 6**). Exotic species including Canada goose | kuihi or native birds that do not specifically breed on braided rivers, such as the spur-winged plovers, were also counted in higher numbers compared to previous averages.

The amount of colonial nesting gull species often fluctuates greatly between years due to the proximity of other rivers that may be used by the birds in any given year. Also, natural events, such as floods, can also displace and shift colonial species. This was highlighted for the black-billed gull | tarāpuka counts, as only 103 individuals were counted this year, compared to the previous average of 573 (**Figure 4**). Potentially the gulls have joined a large colony of approximately 800 black-billed gulls observed on the Charwell River this year, which is less than 35km from the black-billed colony observed on the Waiau Uwha last season. A regional fixed-wing count was undertaken at a similar time to this survey; its findings will shed light on the distribution of tarāpuka this season.

The total bird counts were highest in section 5, section 4 and section 12. **Figure 1** provides a visual representation of the Waiau Uwha sections. For the most part, these sections contained large colonies of Southern black-backed gulls | karoro, which was most noticeable in section 12. Interestingly, in 2023, section 12 contained a large colony of black-billed gulls | tarāpuka, which were not present in 2024. Flocks of Canada goose | kuihi and spur-winged plovers also increased bird counts for these sections.

Distribution of species

The distribution of species remains relatively consistent with previous monitoring years. Banded dotterels were found along most KM reaches along the entire stretch of the 90km Waiau Uwha survey. The dotterel prefers the wider open river beds with the biggest gaps in banded dotterel distribution found within the narrow gorge areas. Wrybills are consistently found along the widest stretches of the river. Wrybill prefer open weed free habitat with small pebbles to feed in, the widest stretches of the Waiau continue to provide the best habitat for wrybill. Single or small groups of black-fronted terns are found flying most KM reaches of the Waiau Uwha survey. But the with the biggest concentration of birds is again found in the shark's tooth colony (a small open braided river section within the gorge area) with several smaller colonies downstream. Southern black-backed gulls continue to aggregate in 8-10 large colonies along the entire stretch of the Waiau Uwha river with the narrow gorge area after the Hanmer bridge being the lowest likelihood of the gulls being found.

Survey effort and conditions

The large flood which occurred 23 days before the survey may have impacted river bird counts and breeding observations. The survey was postponed for the back-up dates to mitigate the effect of the high flows associated with this event to let the river stabilise and allow for the birds return to the river. Other methods to mitigate factors affecting the counts of river bird species include using a standardised survey method⁴, considering surveyor experience (**Table 2, Figure 8**) and effort and considering species-specific ecology, such as the mobile nature of birds and the impacts of disturbance. This count data collected can help inform trends of species presence along the river (**Figure 5**), and it can also be used to indicate habitat suitability for different species. This is helped by standardising the survey method to 1km sections which improves spatial accuracy.

2024 was the 4th year where the survey included observations for all bird species, including passerine and non-riverine species along the braidplain and inhabiting the exotic shrubland, grassland and willow forest along the sides of the survey area (**Table 4**). While some observations were limited to “passerine sp.”, other commonly identified species included the chaffinch | pahirini, skylark | kairaka, goldfinch | kōurarini and blackbird | manu pango. Native passerines observed included the grey warbler | riroriro, silvereye | tauhou, bellbird | korimako, NZ pipit | pīhoihoi, SI fantail | pīwakawaka and the NZ falcon | Kārearea.

⁴ Survey protocols follow: Mischler, C. & Maloney, R. 2019. Protocol for best practice in monitoring braided river birds. Department of Conservation, Wellington. DOC – 6056286.

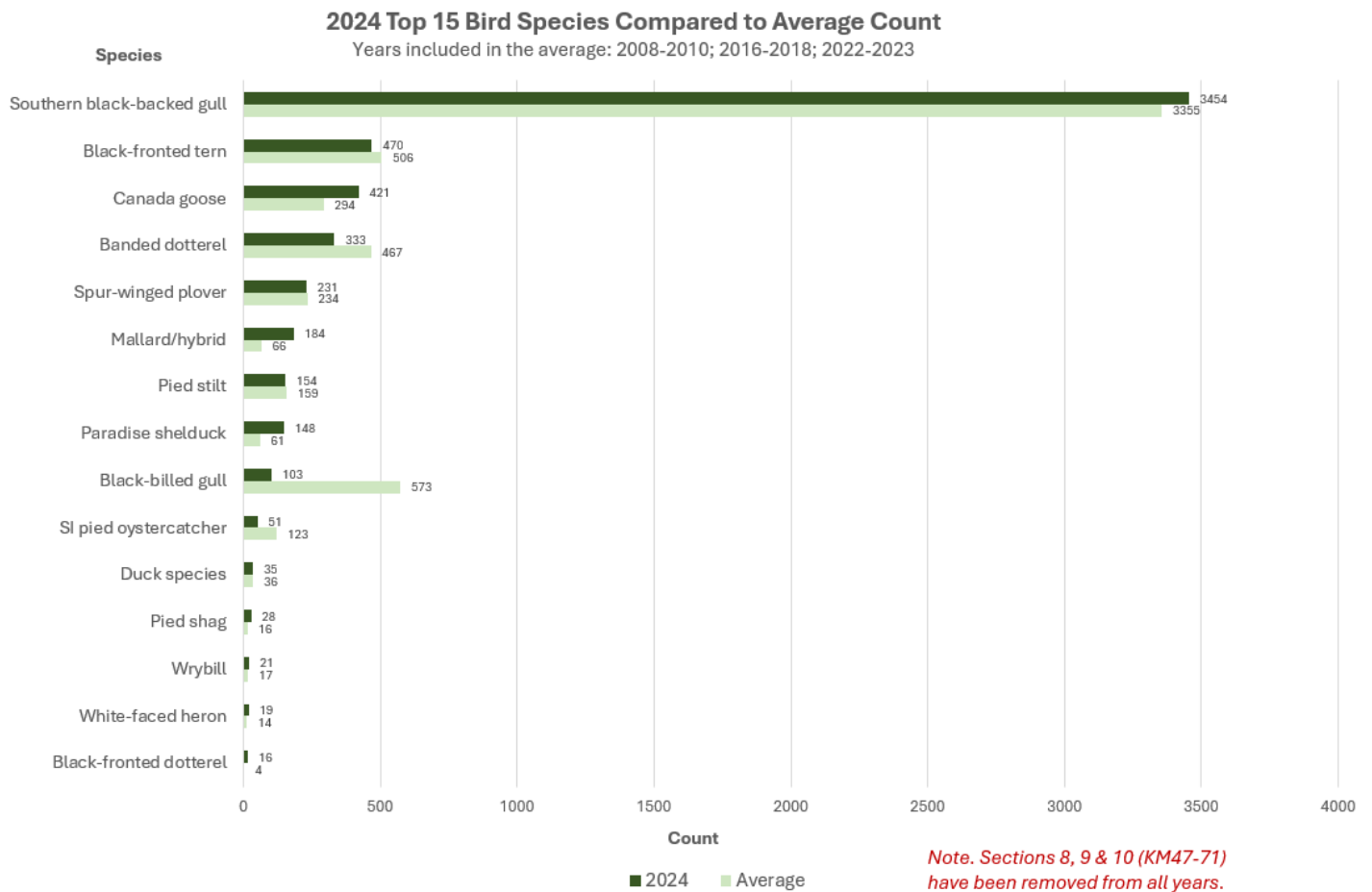


Figure 4: Total adult bird counts of the most abundant river-dependent species (top 15) on the Waiiau Uwha, compared against the average count for the previous surveys (2008-2010; 2016-2018; 2022-2023).

Note. Sections 8, 9 & 10 have been removed from all data. Birds not previously counted in all years have been excluded, as well as non-river dependent species.

Species specific observations⁵

See **Figure 5** for recorded yearly counts, and **Attachment 1& 2** for 2024 distribution maps. Breeding observations can be viewed on **Figure 7**.

Note. All comparisons for previous years' surveys have omitted sections 8, 9 & 10 (KM47-71) to compare to the partial 2024 survey.

Wrybill | Ngutu-parore | *Anarhynchus frontalis*

- Threatened - Nationally Increasing; Population estimated at 5,000- 5,500.

A total of 20 wrybill were counted, which is an increase from 2023 (n=10), 2022 (n=17) and the pre-2024 average (n=17). Wrybill were observed within 7 of the 12 sections, with the highest counts in section 12 & 7 (n=5). Wrybill were observed breeding on the river this season, with chicks observed in section 11, and two other observations of breeding behaviour were observed in section 6 and 7. This was the third highest count of wrybill since 2008, with the highest in 2018 (n=26) and 2016 (n=24). Compared to 2023,

⁵ Population estimations are from [NZ Birds Online](#); Threat status is from the 2021 NZ Threat Classification System.

there were additional wrybill found in sections 5-6 and section 12, which can be seen in the distribution map (**Attachment 1**) and **Figure 7**. The Waiiau Uwha is the northern most river with a breeding wrybill population with previous breeding recorded in Marlborough the breeding range has contracted southwards.

Banded dotterel | Tūturiwhatu | *Charadrius bicinctus*

- At Risk - Declining; Population estimated at 50,000

A total of 333 banded dotterel were counted in 2024, an increase from 2023 (n=302) but a decrease from 2022 (n=433) and the pre-2024 average (n=467). Banded dotterels were observed in all 12 of the sections surveyed, with the highest counts in section 1 (n=81), followed by section 5 (n=49) and section 12 (n=46). 15 breeding observations were recorded, with 6 nests with eggs counted and 9 assumed breeding due to behaviour. No chicks were observed during the survey. However, given the time since the potentially disturbing high flow events, it is likely most nests were yet to fledge chicks (the mean banded dotterel egg incubation length is 25-28 days).

Black-fronted tern | Tarapirohe | *Chlidonias albostratus*

- Nationally Endangered; Population estimated at 5,000- 10,000

A total of 470 black-fronted terns were counted in 2024, which is an increase compared to 2023 (n=223) and similar to counts made in 2022 (n=430) and the pre-2024 average (n=506). Black-fronted terns were observed in 11 of the 12 sections surveyed in 2024, with the highest number counted in section 3 (n=154), along with section 4 (n=125), and section 7 (n=51). 4 colonies of black-fronted terns were counted in 2024, occurring in section 2 (Sharks Tooth), section 4, section 12 and section 13; ranging from 25-150 in size. A flock of 40 was observed in section 7 in which half were observed to be juveniles.

Black-billed gull | Tarāpuka | *Larus bulleri*

- At Risk – Declining; Breeding population estimated at 60,000

A total of 103 black-billed gulls were counted in 2024, which is a decrease compared to 2023 (n=724) but an increase compared to 2022 (n=34; larger colony in the sections missed in 2024).

In 2024, black-billed gulls were only observed in sections 3, 4 & 11, whereas in 2023, a large colony (n=600) was counted in section 12. Black-billed gulls are highly mobile species; each year of the survey their colonies are in different locations and sizes, with this season a large colony being observed on the Charwell River. This highlights the need to compliment ground-based surveys with regional fixed-wing aerial surveys of multiple rivers over a short time period to better represent gull populations across Canterbury's braided rivers.

Southern black-backed gull | Karoro | *Larus dominicanus*

- Not Threatened; The current Canterbury population of Karoro is estimated to be between 105,000 and 175,000.

Around 3400 southern black-backed gulls were counted in 2024, which is pretty similar to previous years counts (pre-2024 average = 3355). The largest colony (~800 individuals) was in section 12, where the colony was spread over a whole kilometre! Since 2016, the Waiiau Uwha appears to be consistently supporting large colonies, with overall numbers fluctuating around 3000.

Pied Stilt | Poaka | *Himantopus leucocephalus*

- Not Threatened; Population estimated at 30,000

There was a total of 154 pied stilts counted in 2024, which is an increase compared to 2023 (n=54), and comparable to the pre-2024 average (n=159). Pied stilts were found in all 12 of the sections surveyed in 2025, with the highest found in section 4 (n=34), section 12 (n=25), and section 5 (n=22). 4 breeding

observations were recorded, with 2 nests with eggs. Populations of pied stilt on the river are known to fluctuate year upon year, but it is promising to see breeding observations and higher numbers this year compared to 2023.

South Island pied oystercatcher (SIPO) | Tōrea | *Haematopus finschi*

- At Risk – Declining; Population estimated at 112,000

A total of 51 SIPO were counted in 2024, which is a decrease compared to 2023 (n=99) and the pre-2024 average (n=123). SIPO were found in 9 of the 12 sections surveyed, with the most counted in sections 1 & 5 (n=11,10). 5 breeding observations were made; 4 of which were behavioural and 1 nest was observed. The lower numbers observed reflect an increase in the absence of SIPO's in specific KM reaches rather than SIPO number declines per KM reach which were similar to previous years.



Figure 5: Bird species counts over survey years, with a moving average line for all surveys.
 Note. Sections 8, 9 & 10 (KM 47-71) have been excluded from all years, as 2024 was a partial count.

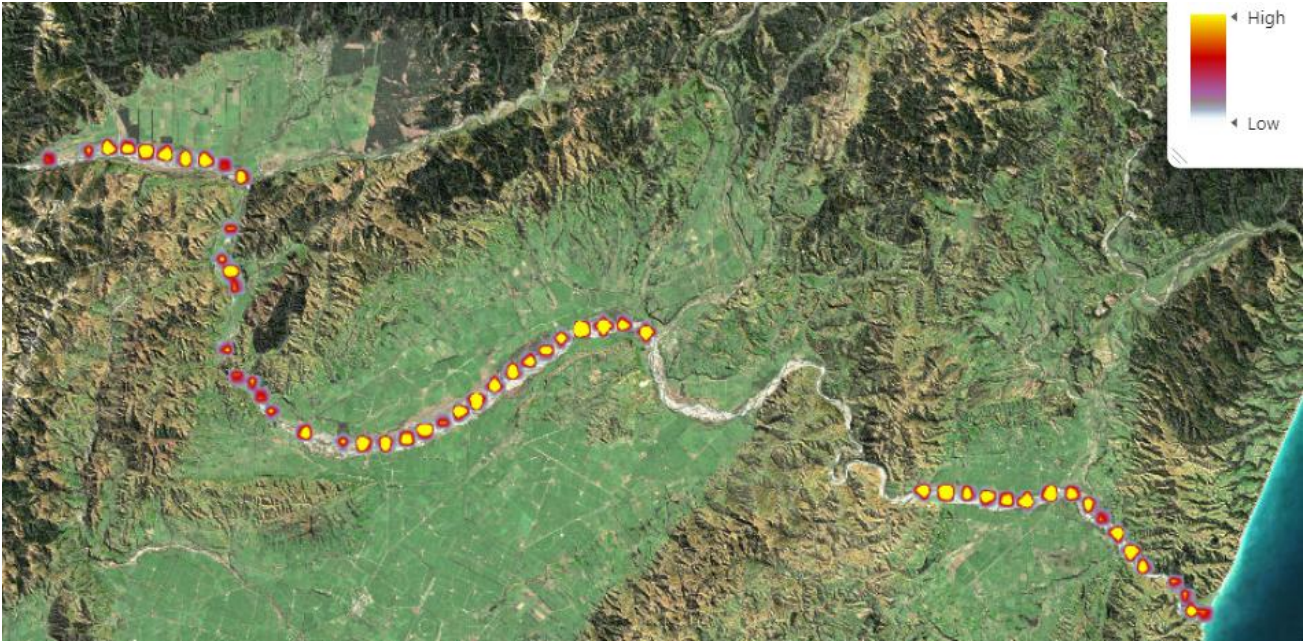


Figure 6: Heatmap showing the 2024 hotspots for native river birds; banded dotterel, black-fronted dotterel, pied stilt, SI pied oystercatcher and wrybill.
Note. Day 3, sections 8, 9 & 10 (KM 47-71) was not surveyed, as seen by gap on map.



Figure 7: Recorded locations for wrybill and breeding observations for all other river bird breeding species during the 2024 survey.
Note. Day 3, sections 8, 9 & 10 (KM 47-71) was not surveyed, as seen by gap on map.

Table 1: Number of colonies and min/max range of colony sizes for Southern black-backed gulls, black-billed gulls and black-fronted terns.

Note. Data does not include sections 8, 9 & 10 (KM47-71).

Species	2008	2009	2010	2016	2017	2018	2022	2023	2024
Southern black-backed gull karoro	10 (10-380)	11 (50-600)	14 (12-300)	11 (70-600)	14 (15-600)	8 (180-1800)	11 (8-800)	10 (24-1000)	8 (30-800)
Black-billed gull Tarāpuka	3 (50-800)	1 (140)	2 (60-450)	1 (400)	0	1 (95)	0	1 (600)	1 (36)
Black-fronted tern Tarapirohe	6 (10-75)	9 (10-120)	2 (15-100)	6 (25-100)	2 (10-150)	9 (8-150)	6 (12-65)	3 (30-300)	5 (25 - 150)

Table 2: Survey days, number of people and effort across the survey years.

Note. Total survey days is used as a measure of survey effort. It is calculated as the number of total people on the river per day, multiplied by the number of survey days.

Year	2008	2009	2010	2016	2017	2018	2022	2023	2024
Number of survey days	6	7	4	4	4	4	4	4	3
Total number of surveyors	14	19	20	27	26	28	32	46	25
Total survey days	39	52	56	47	50	58	52	53	41

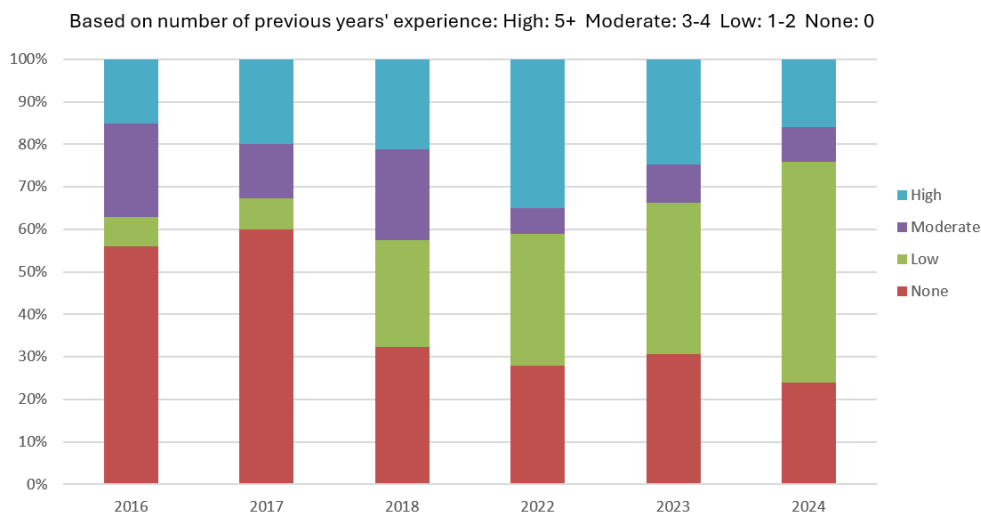


Figure 8: Surveyor experience for each survey year that it has been recorded. Surveyor experience is measured based on the number of previous years' experience in bird counts.

Note. In 2008, 2009 and 2010 surveyor experience was not recorded.

Table 3: Count of adult **river bird** species per survey year.

Species are ordered by guild, and then from the highest to lowest count for 2024.

*Note. 2024 was not a complete count, hence sections 8, 9 & 10 (KM47-71) have been removed from all total counts of species across survey years. NR: Birds not recorded during the survey year. Exotic species are denoted by the * symbol in the species column.*

Species ⁶	2008	2009	2010	2016	2017	2018	2022	2023	2024
Gulls and terns									
Southern black-backed gull Karoro	2090	2662	1807	3873	2730	6269	3464	3946	3454
Black-fronted tern Tarapirohe	466	744	450	540	338	746	430	334	470
Black-billed gull Tarāpuka	2035	265	734	577	42	175	34	724	103
Red-billed gull Tarāpuka	17	4	28	10	0	20	4	0	5
White-fronted tern Tara	66	80	42	15	21	17	13	2	2
Caspian tern Tara	5	1	1	6	0	2	0	1	2
Skua Hākoakoa	0	1	0	0	0	0	0	0	0
Total gulls and terns counted	4679	3757	3062	5021	3131	7229	3945	5007	4036
Waders									
Banded dotterel Tūturiwhatu	393	418	464	475	376	875	433	302	333
Spur-winged plover	205	128	419	68	142	383	256	271	231
Pied stilt Poaka	92	197	55	202	11	503	154	54	154
Sl pied oystercatcher Tōrea	144	140	118	126	143	131	80	99	51
Wrybill Ngutu-parore	11	17	15	24	18	26	17	10	20
Black-fronted dotterel	0	0	0	2	1	5	12	13	16
Variable oystercatcher Tōrea Pango	4	6	4	5	2	2	4	4	3
Royal spoonbill Kōtuku Ngutupapa	0	1	0	0	0	0	5	1	1
NZ Dotterel	0	0	0	0	0	0	0	0	1
Black stilt Kākī	0	0	0	0	0	4	0	0	0
Red Knot Huahou	0	0	0	0	0	2	0	0	0

⁶ Te Reo Māori ingoa sourced from [Mahika kai | Environment Canterbury](#) & Checklist of NZ Birds [checklist-2022.pdf](#)

Species ⁶	2008	2009	2010	2016	2017	2018	2022	2023	2024
Sharp tailed sandpiper Kohutapu	0	0	0	0	0	2	0	0	0
Total waders Counted	849	907	1075	902	693	1933	961	754	811
Heron									
White-faced heron Matuku Moana	7	4	16	16	9	18	26	16	19
Cormorants (Shags)									
Pied cormorant Kōau	15	18	21	6	9	28	21	6	28
Black cormorant Kōau	57	12	28	3	32	23	6	30	11
Little pied cormorant	5	1	1	1	0	0	0	0	2
Little black cormorant Kawau Tūi	0	0	0	0	0	0	0	0	1
Cormorant species	NR	NR	NR	NR	NR	NR	NR	4	0
Spotted cormorant Kawau Tikitiki	0	0	0	0	0	3	0	0	0
Total cormorants counted	77	31	50	10	41	54	27	40	42
Waterfowl									
Canada goose* Kuihi	328	279	250	161	231	515	220	364	421
Mallard/Hybrid Rakiraki	0	38	51	47	84	231	8	68	184
Paradise shelduck Pūtakitaki	77	52	42	42	35	106	92	43	148
Grey duck Pārera	0	0	0	3	5	6	0	0	1
Black swan Kakī nui	1	8	0	7	0	0	0	0	0
Duck species	120	55	38	0	0	0	60	14	35
Grey teal Tete	0	0	0	0	0	0	0	3	0
Scaup Pāpango	14	13	0	0	0	0	0	0	0
Total waterfowl counted	540	445	381	260	355	858	380	492	789
Other									
Kingfisher Kōtare	6	2	0	6	2	7	29	41	27
Swamp harrier Kāhu	10	4	0	7	9	8	13	12	13
NZ pipit Pīhoihoi	3	11	9	17	16	19	17	11	11
Total other birds counted	19	17	9	30	27	34	59	64	51

Table 4: Count of adult **non-river bird** species per survey year. Species are ordered by guild, and then highest to lowest count for 2024.

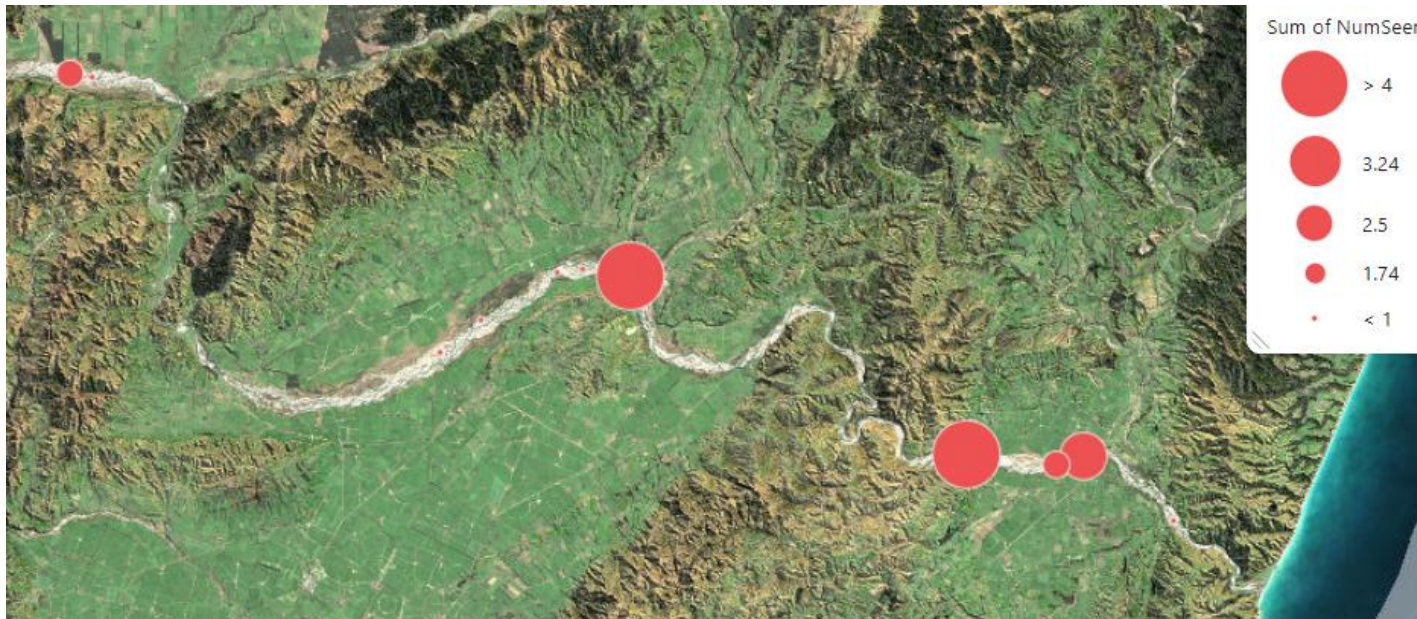
*Note. 2024 was not a complete count, hence sections 8, 9 & 10 (KM47-71) have been removed from all previous survey data for comparison. NR: birds not recorded during the survey year. Exotic species are denoted by the * symbol in the species column, all other species are endemic or non-endemic.*

Species	2008	2009	2010	2016	2017	2018	2022	2023	2024
Passerine									
Chaffinch* Pahirini	NR	NR	NR	NR	NR	43	187	181	427
Passerine sp.	NR	NR	NR	NR	NR	NR	401	646	295
Skylark* Kairaka	NR	NR	NR	NR	NR	27	115	101	174
Yellowhammer* Hurukōwhai	NR	NR	NR	NR	NR	NR	33	13	71
Goldfinch* Kōurarini	NR	NR	NR	NR	NR	4	12	58	59
Blackbird* Manu Pango	NR	NR	NR	NR	NR	NR	36	89	54
Rock Pigeon* Kererū Aropari	0	0	0	1	0	5	16	63	49
Welcome Swallow Warou	1	0	0	6	1	6	119	98	48
Silvereve tauhou	0	0	0	0	0	0	17	72	44
Grey warbler Riroriro	NR	NR	NR	NR	NR	NR	23	32	39
Magpie* Makipai	NR	NR	NR	NR	NR	NR	14	6	19
Redpoll*	NR	NR	NR	NR	NR	NR	5	22	19
Starling* Tāringi	NR	NR	NR	NR	NR	NR	3	3	18
Fantail Pīwakawaka	NR	NR	NR	NR	NR	NR	19	29	17
Song thrush* Manu-kai-hua-rakau	NR	NR	NR	NR	NR	NR	1	23	17
Greenfinch*	NR	NR	NR	NR	NR	NR	8	19	16
Bellbird Korimako	NR	NR	NR	NR	NR	NR	15	13	10
Shining cuckoo Pīpīwharauoa	NR	NR	NR	NR	NR	NR	9	5	8
Dunnock*	NR	NR	NR	NR	NR	1	7	20	6
House Sparrow* Tiu	NR	NR	NR	NR	NR	NR	6	21	37
Cirl bunting*	NR	NR	NR	NR	NR	NR	0	0	0
Raptor									
NZ Falcon Kārearea	0	0	0	0	0	1	0	0	0
Other									
California quail* Tikaokao	0	0	0	3	0	3	15	18	16
Pūkeko	1	0	0	0	0	0	0	0	0
Total non-river birds counted	2	0	0	0	1	90	1061	1532	1447

Attachment 1: 2024 Species distribution maps



1). Banded dotterel | Tūturiwhatu



2). Wrybill | Ngutu-parore



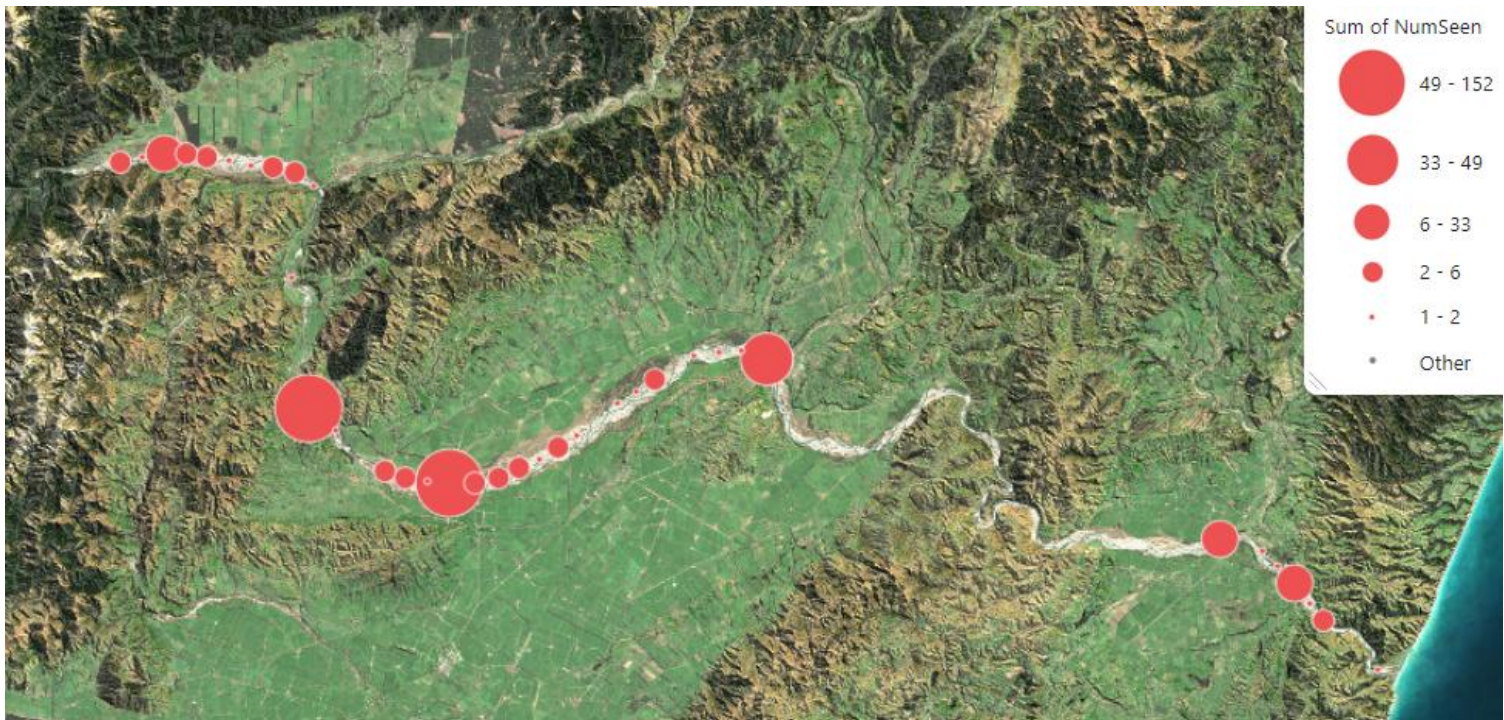
3). Pied stilt | Poaka



4). South Island pied oystercatcher, SIPO | Tōrea



5). Black-billed gull | Tarāpuka



6). Black-fronted tern | Tarapirohe



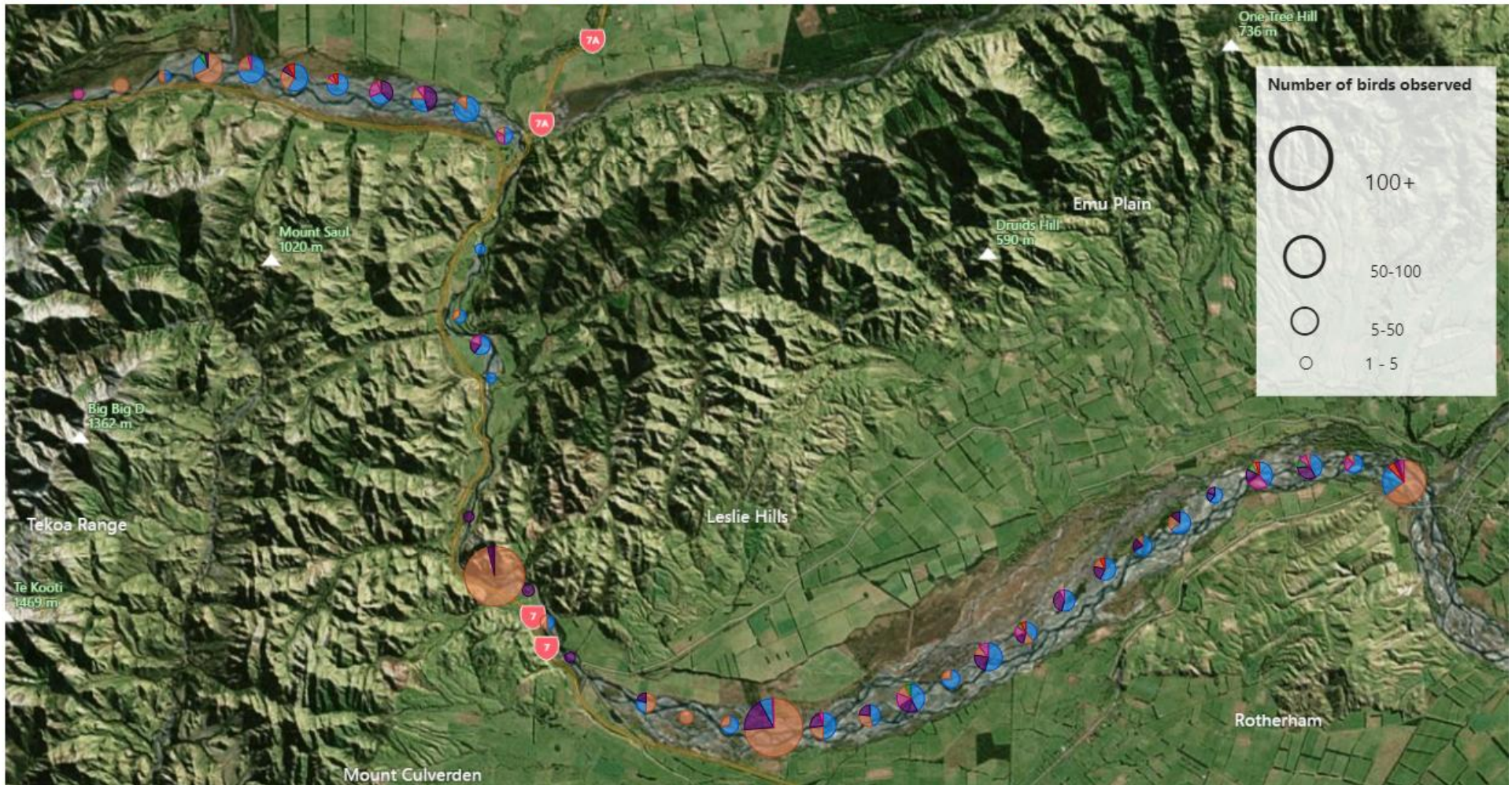
7). Southern black-backed gull | Karoro



8). Black-fronted dotterel

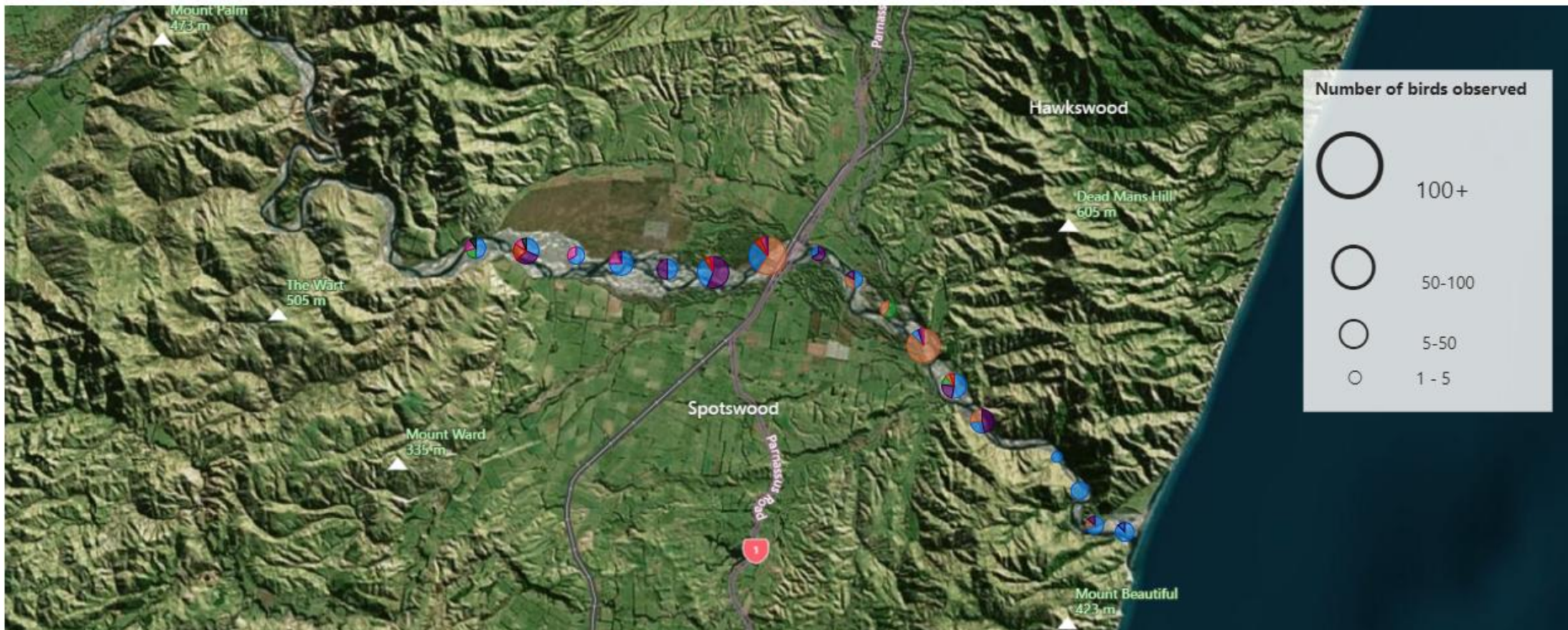
Attachment 2: 2024 river bird observations by KM (excluding gulls)

Species ● Banded dotterel ● Black-fronted dotterel ● Black-fronted tern ● Caspian tern ● Pied stilt ● SI pied oystercatcher ● White-fronted tern ● Wrybill



Sections 1-7 of Waiau Uwha. Pie charts represent proportion of each species for each KM (key for species along the top of graph). Size of the pie chart represents the total number of birds observed in that KM.

Species ● Banded dotterel ● Black-fronted dotterel ● Black-fronted tern ● Caspian tern ● Pied stilt ● SI pied oystercatcher ● White-fronted tern ● Wrybill



Sections 11-15 of Waiau Uwha. Pie charts represent proportion of each species for each KM (key for species along the top of graph). Size of the pie chart represents the total number of birds observed in that KM.