2025

ANNUAL KIWI SURVEY

PIROA
Conservation Trust

KIWI POPULATION AT A GLANCE

The 2024/2025 survey confirmed kiwi at 21 sites across the ranges, showing a population that is widespread but uneven. Some areas are strongholds, others recorded only a few or no calls.

- Strongholds: The highest levels of bird activity were recorded in the Marunui area and its adjoining bushland. This region showed the strongest call rates, with numerous duets identified—an indicator of established breeding pairs. This result aligns with expectations, as Marunui was the first site to be populated through translocation efforts.

- Population Spread: Kiwi continue to be detected at Langs Beach Estate, Bream Tail Farm, Waorahi, and the Robert Hastie Reserve. These ongoing detections point to a resilient and expanding distribution of kiwi across the landscape.

- Duet calls: Duet Calls: This year's survey included the recording of duet calls, which serve as indicators of established pair territories and potential breeding behaviour. A total of 63 duet events were recorded across multiple sites. While duets suggest the presence of bonded pairs, they do not provide a definitive count of distinct pairs, nor do they confirm breeding success.

- Sex ratio: Male calls still outnumber female calls, but the balance is improving. This year the ratio was approximately 1.8 males for every female, compared with 2.1 for every female last year. It is important to note that juveniles do not call until they are around 18 months old.

- Predator control correlation: Most detections were in or near areas where intensive predator control is undertaken, supporting the value of trapping and targeted toxins for kiwi survival and spread.

IN SUMMARY:

Kiwi in the Brynderwyns are holding their ground, pairing up, and continuing to spread beyond the original release sites. With ongoing predator control, the population shows encouraging signs of stability and resilience, with detections suggesting continued spread beyond the original release sites.

AUTHORED BY:

Debs Searchfield, Ian Fish and Katie Gibb

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INTRODUCTION

The Piroa Conservation Trust (PCT) supports community-led conservation work across the Brynderwyn Ranges to restore the life force (mauri) of this landscape. By supporting groups to reduce invasive mammals, control weeds, and work alongside local partners and hapū, our community is bringing the forest (ngahere) back to health. At the heart of this work (mahi) is the North Island brown kiwi (Apteryx mantelli). Kiwi were reintroduced to Marunui between 2013 and 2015 (43 birds), with a further six added in 2020. Today, they are more than just residents of the ranges - a treasured species (taonga), and a living indicator of whether our collective protection is succeeding.

To protect these birds and all native wildlife, PCT is helping to connect local projects into what is now being referred to as the 'Open Sanctuary', a network of native habitats with intensive predator control within the wider High Value Area (HVA). This has already led to nearly 1,000 hectares of contiguous forest being protected and is planned to expand to more than 2,000 hectares in the next three years, laying the foundation for kiwi recovery and a safe habitat for generations to come (Figure 1 next page).

Kiwi call surveys provide a consistent, low-impact way to track presence across the land. A single call confirms a bird is holding territory; repeated listening over time builds a picture of where populations are strongest, where they are spreading, and where further protection is required. It is important to note that detections indicate presence, not the total number of individuals, and non-detections do not confirm absence. Over time, however, these surveys reveal clear trends and help guide management.

In 2024/25 our monitoring programme was structured in two complementary strands:

1. RANGE-WIDE DETECTION SURVEYS (RDS)

Continuing from 2022–2024, automated recorders were deployed across accessible parts of the HVA. These surveys focus on detection versus non-detection, following up on credible public reports and providing tangible, map-based feedback for the community. The detections help us prioritise best-practice predator control where it will protect the most birds, while also engaging landowners and volunteers by showing real, on-the-ground results.

2. ANNUAL COMPARISON SITES – FIVE-YEAR SERIES (ACS)

As recommended last season, we established 11 fixed comparison sites in May 2025, representing a range of habitats and locations across the HVA. Each site has secure long-term access, allowing repeat surveys for at least five consecutive years. This creates a robust framework to detect population trends over time. To maximise comparability, recordings were aligned with the Northland Kiwi Call Count Survey (NKCCS) windows in winter, during the new moon when call rates are highest. In this way, this work contributes not only to local monitoring but also to the national picture for kiwi conservation.

PROGRAMME CONTEXT & OBJECTIVES

Since 2022, the Piroa Conservation Trust has commissioned annual kiwi surveys across the Piroa Brynderwyn Ranges. These surveys provide a structured way to deepen our knowledge of kiwi in the landscape and to guide conservation decisions.

OUR OBJECTIVES ARE TO:

1. Map the current distribution of kiwi across the ranges.
2. Focus predator control where it will have the greatest impact.
3. Support advocacy and education by providing clear, evidence-based updates.
4. Establish consistent monitoring sites to track long-term population trends.
5. Tell our story and share our learning with other conservation groups, our community and funders.

Kiwi are both a flagship and an indicator species. Their distribution and calling activity give us direct feedback on whether predator control is working and where further effort is needed. While call surveys are presence–absence by design, the move to a network of fixed Annual Comparison Sites (ACS) means year-on-year results can now show us more than detections alone — they begin to reveal meaningful trends.

This year marks the first in a five-year ACS series, while Range-wide Detection Surveys (RDS) continue to expand coverage and fill gaps across the land.

WHY THIS APPROACH

- Kiwi call surveys (manual and automated) are designed to detect presence and provide indices of relative activity, not absolute density. Because detection is imperfect, results are treated as detection/non-detection; a non-detection does not prove absence.

- Annual Comparison Sites (ACS) provide year-on-year consistency, so call-rate indices can show whether activity is increasing, stable, or declining. We reduce false negatives by standardising timing and conditions: winter/new-moon windows, the first hours after dusk, settled weather, and repeat nights at fixed locations. We also account for known biases, such as males calling more frequently than females.

- Range-wide Detection Surveys (RDS) broaden spatial coverage, ground-truth credible public reports, and fill gaps—supporting maps that highlight both where kiwi have been detected and areas needing more effort.

- Conducting surveys during the Northland Kiwi Call Count Survey (NKCC) windows ensures our methods align with Department of Conservation standards. This makes our results directly comparable across Northland and nationally and places our local findings within the wider recovery picture for the species.

- Together, RDS (coverage) and ACS (consistency) let us both find birds and measure change—informing predator-control priorities, advocacy on roads and dog safety, and community engagement—while ensuring our data contributes to the broader knowledge base for kiwi across New Zealand (Aotearoa).

METHODOLOGY

SITE SELECTION

RANGE-WIDE DETECTION SURVEY (RDS).

Sites were selected using the following criteria:

- Random placements to fill in survey gaps or re-check previous detections.
- Locations identified through public reports of kiwi calls.
- Volunteer-manned listening sites contributing to the Northland Kiwi Call Count Survey (NKCCS).
- Opportunistic placements where landowners provided access or where previous surveys suggested possible kiwi presence.

ANNUAL COMPARISON SITES (ACS):

Eleven sites were established to provide a consistent framework for long-term monitoring. These sites were chosen to:

- Give broad geographical coverage across the Brynderwyn Ranges, spanning podocarp forest, regenerating scrub, modified farmland, and exotic forestry.
- Build on areas previously surveyed, where kiwi had been detected (including in low numbers).
- Ensure guaranteed access for a minimum of five years, with most sites accessible without landowner assistance (two require support).
- Maximise the likelihood of detecting calls while reducing reliance on one-off opportunities.

Annual Comparison Sites 2025
Piroa Conservation Trust

LISTENING DEVICES

Kiwi Listening Devices (KLDs) were secured to trees approximately 2m above ground using elastic straps.

Sites were chosen to avoid interference from running water, rustling palms, or road noise, and positioned just below ridgelines to minimise wind.

Coverage was estimated by buffering each station with a 1.2 km radius to represent average detection distance. Overlapping buffers were dissolved to avoid double-counting.

RANGE-WIDE DETECTION SURVEY (RDS)

Listening devices were deployed year-round, as in the previous two survey seasons. Each unit recorded continuously from dusk until dawn (8–12 hours depending on the season). Devices were secured to trees with a bungee approximately two metres above the ground, positioned to provide a wide listening area while avoiding interference from running water, rustling vegetation, or road noise, and placed just below ridgelines to reduce exposure to wind.

ANNUAL COMPARISON SITES (ACS)

At each of the eleven Annual Comparison Sites, a single listening device was secured to a tree with a bungee approximately two metres above the ground and positioned to maximise coverage while avoiding interference from wind or background noise. Devices were left in place for seven consecutive nights, recording continuously from dusk until dawn (18:00–07:00). Data collection will be repeated annually for five years at the same locations and during the same seasonal window, coinciding with the NKCCS, to ensure comparability across years. All recordings are archived and stored on external hard drives to allow for future re-analysis.

NORTHLAND KIWI CALL COUNT SURVEY (NKCCS)

In addition to device-based monitoring, the Trust also contributed to the NKCCS. This Northland wide programme is coordinated by the Department of Conservation and Kiwi Coast and takes place during two new-moon windows in winter, when call rates are highest (in 2025: 17 May – 3 June and 14 June – 13 July). Volunteers staffed seven listening stations across the Brynderwyn Ranges, recording calls manually during two-hour periods from 18:00–20:00. Observers documented the time, sex, direction, and estimated distance of each call, as well as weather and noise conditions, providing an independent dataset that complements both the Range-wide Detection Survey and the Annual Comparison Sites.

DATA ANALYSIS

All recordings were analysed using Raven Lite (Cornell Lab of Ornithology), which produces spectrograms allowing visual confirmation of call signatures. Male kiwi calls are high-pitched and repeated, while female calls are lower and more guttural. Calls that resembled morepork, vehicles, or other noise were cross-checked carefully to avoid misclassification. In earlier seasons both Raven and AviaNZ (DOC/University of Auckland software) were trialled, but AviaNZ often misidentified distant calls or confused kiwi with morepork, so Raven was used exclusively for the 2024/25 survey.

For RDS, the objective was detection versus non-detection. Analysis continued until both a male and a female call had been confirmed on each device. Once this was achieved, further processing of that site's recordings was not undertaken, as the survey was designed to establish presence rather than calculate call rates.

For ACS all calls were fully analysed. Each recording was reviewed in Raven to identify the number of calls, sex of the caller, time of occurrence, and call duration. This provided a complete dataset for calculating calls per hour, comparing male and female call ratios, and tracking changes in call activity over time. Since these sites will be monitored for five consecutive years, maintaining complete call records is essential for detecting trends and making reliable comparisons.

Call durations were measured from the spectrograms as the time between the first and last visible elements of a call. However, for the 2024/25 season no distinction was made between complete and incomplete calls. As a result, some durations may underestimate true call length where calls were cut short by wind noise, overlapping calls from other kiwi, or other interference. This should be taken into account when interpreting call duration results. Future surveys will mark complete versus incomplete calls to improve comparability across years.

For the NKCCS, every call heard by trained volunteers was documented, including time, sex, estimated distance and direction, and environmental conditions. These human observations are directly comparable with national datasets and provide a valuable cross-check against the automated recorders, particularly during the standardised two-hour evening listening periods.

All raw recordings, spectrogram files, and observer data sheets have been archived securely on external hard drives, ensuring accessibility for re-analysis in future years

RESULTS

RANGE - WIDE DETECTION SURVEYS

In 2024/25, 37 Stage 1 devices were deployed across the ranges. Six failed, leaving 31 that returned usable data. Kiwi were detected at 12 sites (6 male only, 6 both male and female), while 19 sites recorded no detections (Table 1 below).

To strengthen the dataset, the 11 Stage 2 annual comparison sites were incorporated into these results and analysed in the exact same way as the Stage 1 devices. Kiwi were detected at 9 of these sites (five with both male and female calls, four with male calls only), while 2 sites recorded no detections.

In addition, 7 volunteer human listening stations were run during the NKCCS periods. Kiwi were heard at six of these stations (four with both male and female calls, two with male only), while one station recorded no detections.

Across all methods combined, survey coverage in 2024/25 totalled 91.1 km². Kiwi were detected at 21 sites in total, with females present at more than half of them and a male-to-female call ratio of 1.91 (Table 2 next page).

METHOD	COUNT	FAILED	DETECTED KIWI	NO KIWI	FEMALES HEARD
RDS	37	6	12	19	6
ACS	11	0	9	2	5
NKCCS	7	0	6	1	4
TOTAL	55	6	27	22	15

Table 1 Detection outcomes across the three monitoring approaches used in 2024/25 (Range-wide Devices Surveys (RDS), Annual Comparison Sites (ACS), and Northland Kiwi Call Count Survey (NKCCS)). The table shows the number of units deployed, failures, sites where kiwi were kiwi were detected or not detected, the number of sites where females were heard,

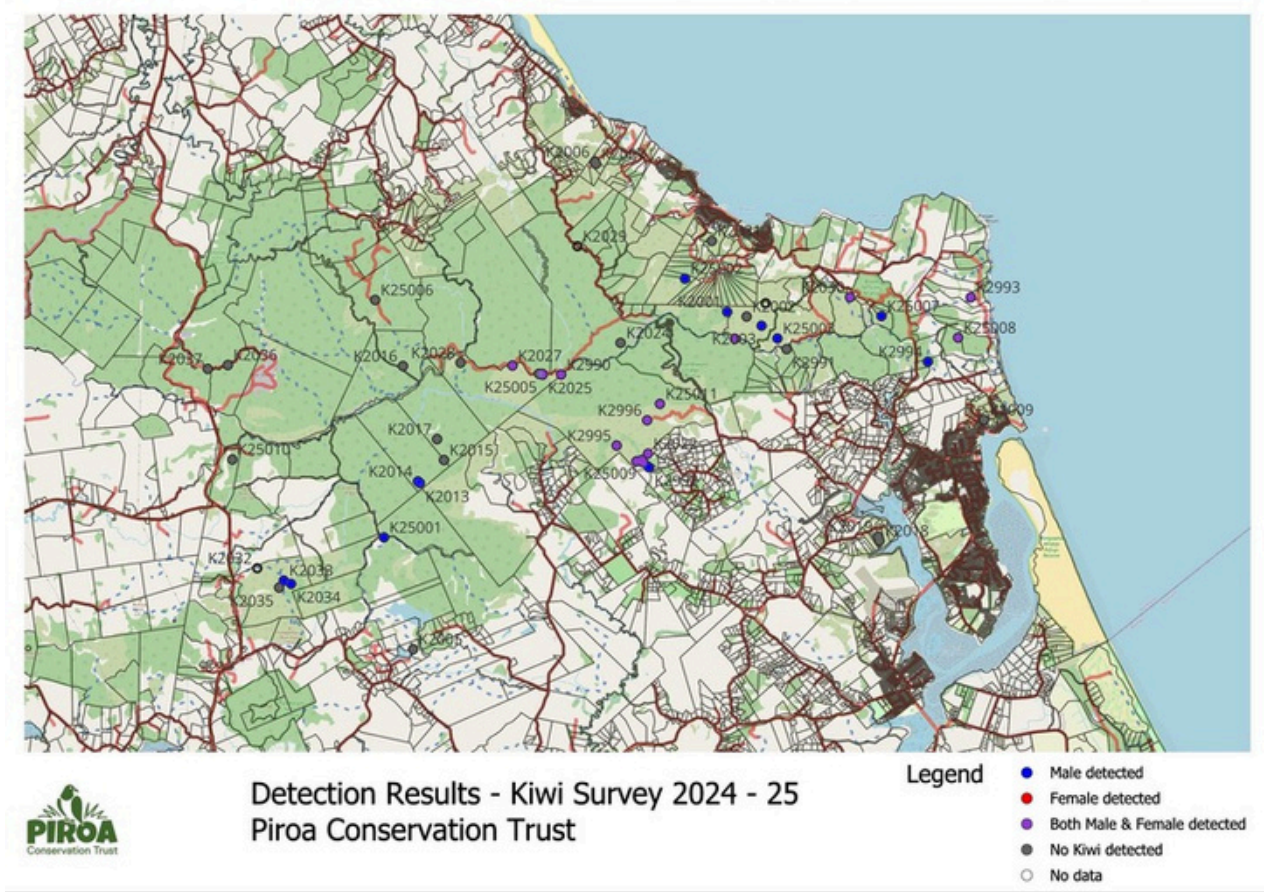

Figure 3. Map of kiwi detection outcomes across the 2024/25 survey (male only, female only, both sexes, no kiwi).

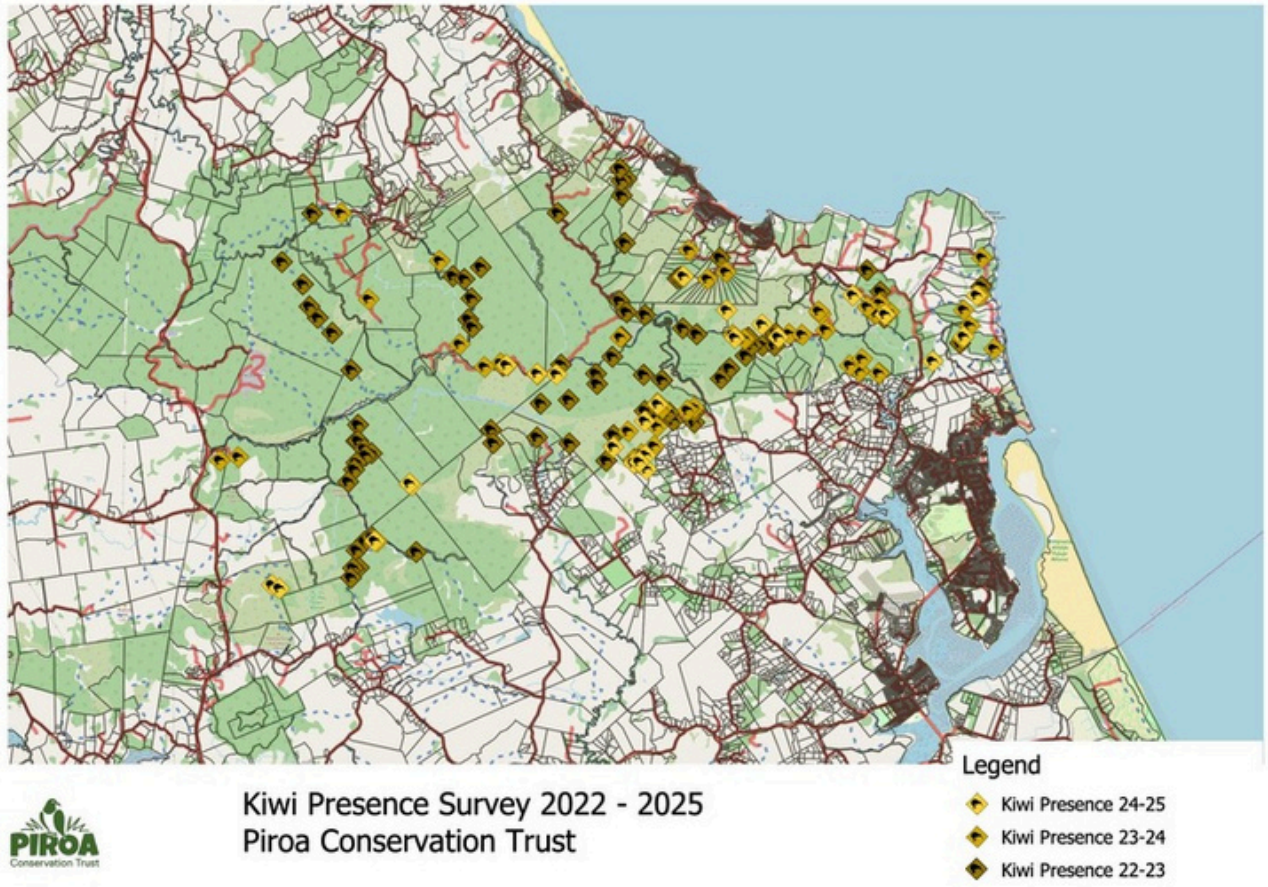

Figure 4. Map of kiwi detection presence 2022-2025 surveys

Note: Fewer absolute detections in 2024/25 reflect fewer devices deployed under the new ACS methodology, not a decline in kiwi presence.

COMPARISON BETWEEN SEASONS

The 2024/25 survey operated 55 stations (49 successful), compared with 90 stations (89 successful) in 2023/24. Despite fewer units deployed, the overall detection rate increased from 31.5% in 2023/24 to 55.1% in 2024/25, reflecting more efficient placement of recorders and consistent returns from the comparison sites (Table 2 next page).

Female kiwi were detected at a higher proportion of sites in 2024/25 (55.6%) compared with 2023/24 (47.2%). The male-to-female call ratio decreased from 2.12 in 2023/24 to 1.80 in 2024/25, representing an approximate 15% improvement towards a balanced sex ratio (Figure 3).

Coverage was broadly similar across years (100.11km² in 2023/24, 91.15 km² in 2024/25). While the 2023/24 survey produced a higher absolute number of detections (53 vs. 27 in 2024/25), this partly reflects the larger number of devices deployed. When expressed as detection rate and female representation, the 2024/25 results indicate stable occupancy and a balanced sex structure within the monitored population.

Season	Devises	Failed	Calls (both sex)	Male only	Females	No detection	Detection rate (%)	Sex ratio	Coverage km2
2023/24	90	1	53	28	25	36	31.46067416	2.12	100.11
2024/25	55	6	27	12	15	22	55.10204082	1.8	91.15

Table 2 Seasonal summary of monitoring outcomes for 2023/24 and 2024/25. Columns show the number of stations deployed, failures, detections (sites with kiwi calls confirmed), detections with males only, detections with females present, sites with no detections, detection rate, sex ratio (males per female based on detections), and total survey coverage (km²)

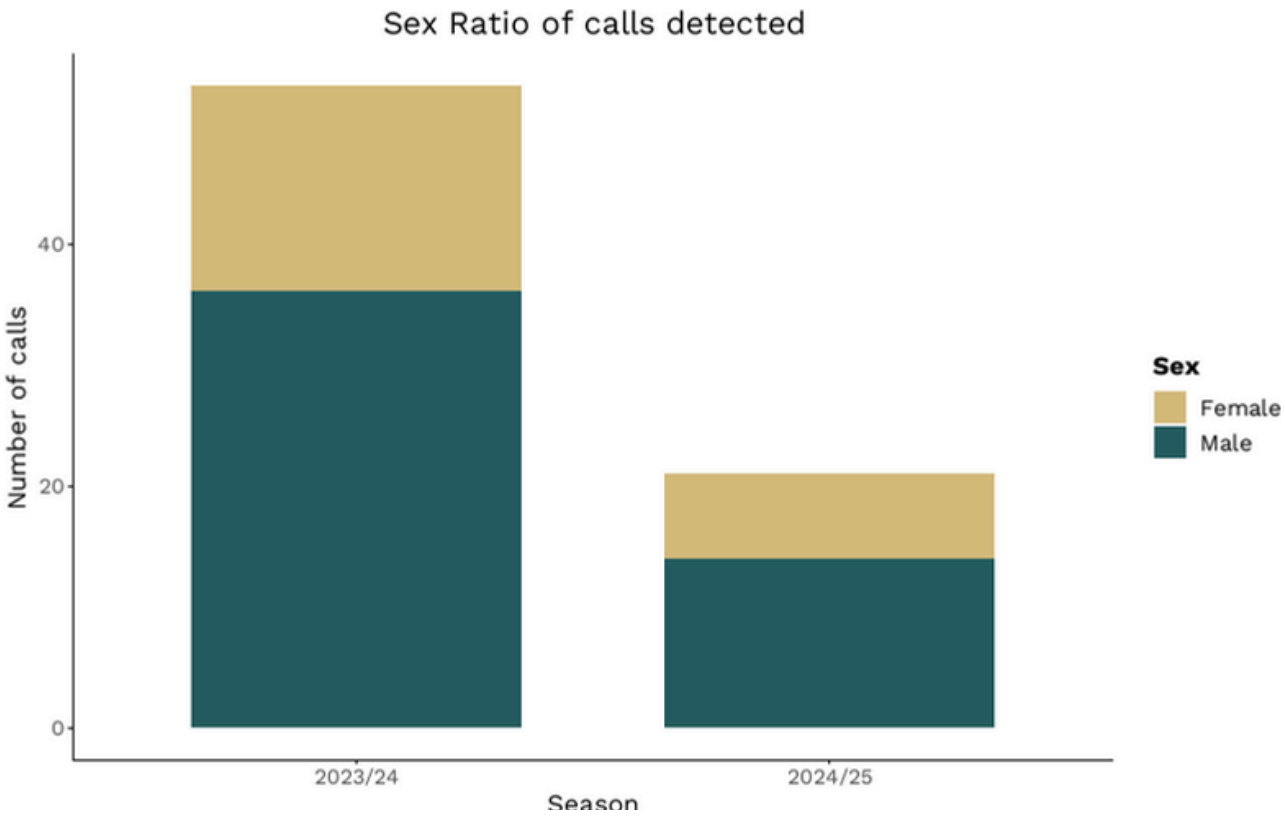

Figure 5 above. Stacked bar graph of kiwi call detections by sex for the 2023/24 and 2024/25 monitoring seasons. Bars show the number of detections split into males (blue) and females (gold). Detection ratios shifted from 2.12 : 1 in 2023/24 to 1.80 : 1 in 2024/25. (Note: n = 53 devices deployed in 2023/24; n = 27 in 2024/25, which partly explains the difference in total detections.)

ANNUAL COMPARISON SITES

Kiwi calls were recorded at nine of the ACS monitoring sites, with two sites (Forestry Road west and the AKT property) returning no detections. In total, 474 calls were recorded across the nine active sites during the 2025 survey period (Figure 3) Of these, 367 were male calls and 107 were female calls, showcasing a clear male bias across the monitored population. This equates to a ratio of approximately 3.4 male calls for every female call.

Location/Site	Start Date	Finish Date	Call count	Male Calls	Female Calls	Duet Count	Sex Ratio
Forestry Road east	20/05/2025	25/05/2025	53	49	4	13	1.75
Hokonui	17/05/2025	18/05/2025	6	6			12.25
Langes Beach Estate	19/05/2025	25/05/2025	68	68			
Bream Tail Farm	19/05/2025	25/05/2025	44	28	16		
Marunui House	15/06/2025	21/06/2025	222	155	67	40	2.31
Marunui south	19/05/2025	25/05/2025	41	22	19	10	1.16
Robert Hastie Reserve	19/05/2025	23/05/2025	15	15			
Waorahi east	19/05/2025	24/05/2025	4	4			
Waorahi west	19/05/2025	24/05/2025	21	20	1		20
Total			**474**	**367**	**107**	**63**	**3.43**

Table 3 Summary of kiwi call detections across all Stage 2 monitoring sites during the 2024/25 survey. A total of 474 calls were recorded, comprising 367 male calls and 107 female calls, with 63 duets identified. Call detections were unevenly distributed across sites, with Marunui House accounting for nearly half of all calls (222, including 40 duets). The overall male-to-female call ratio was 3.4:1, though this varied widely by site, from near parity at Marunui south (1.2:1) to extreme male bias at Waorahi west (20:1)

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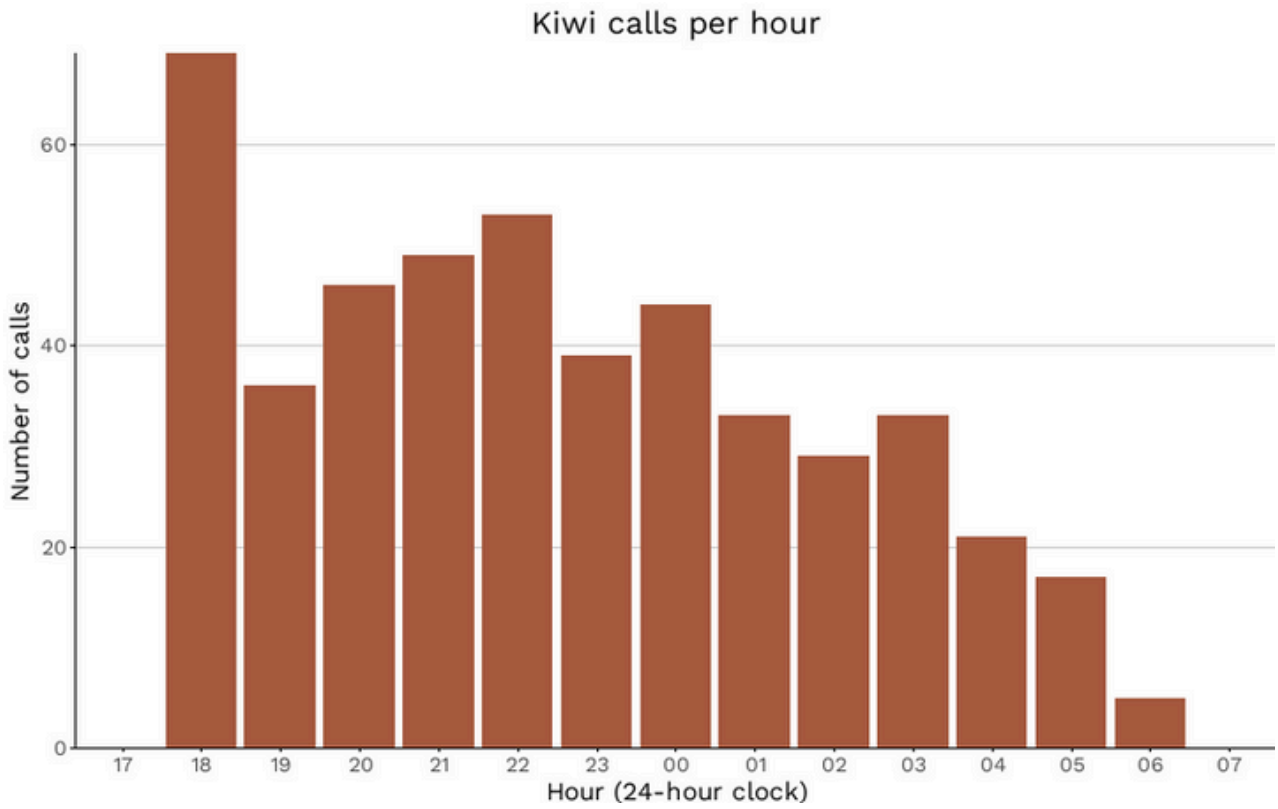


Figure 6 above. Kiwi calls per hour across all ACS sites combined (total calls).

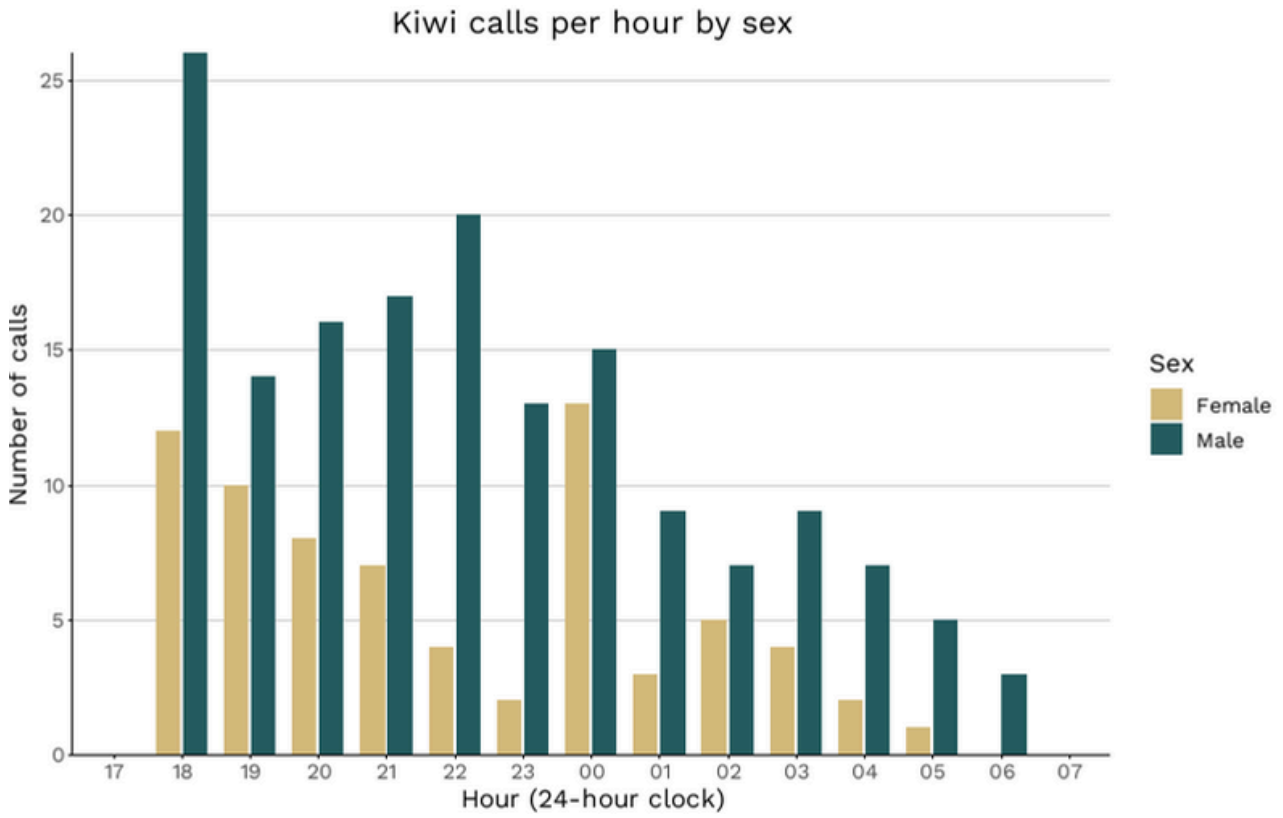
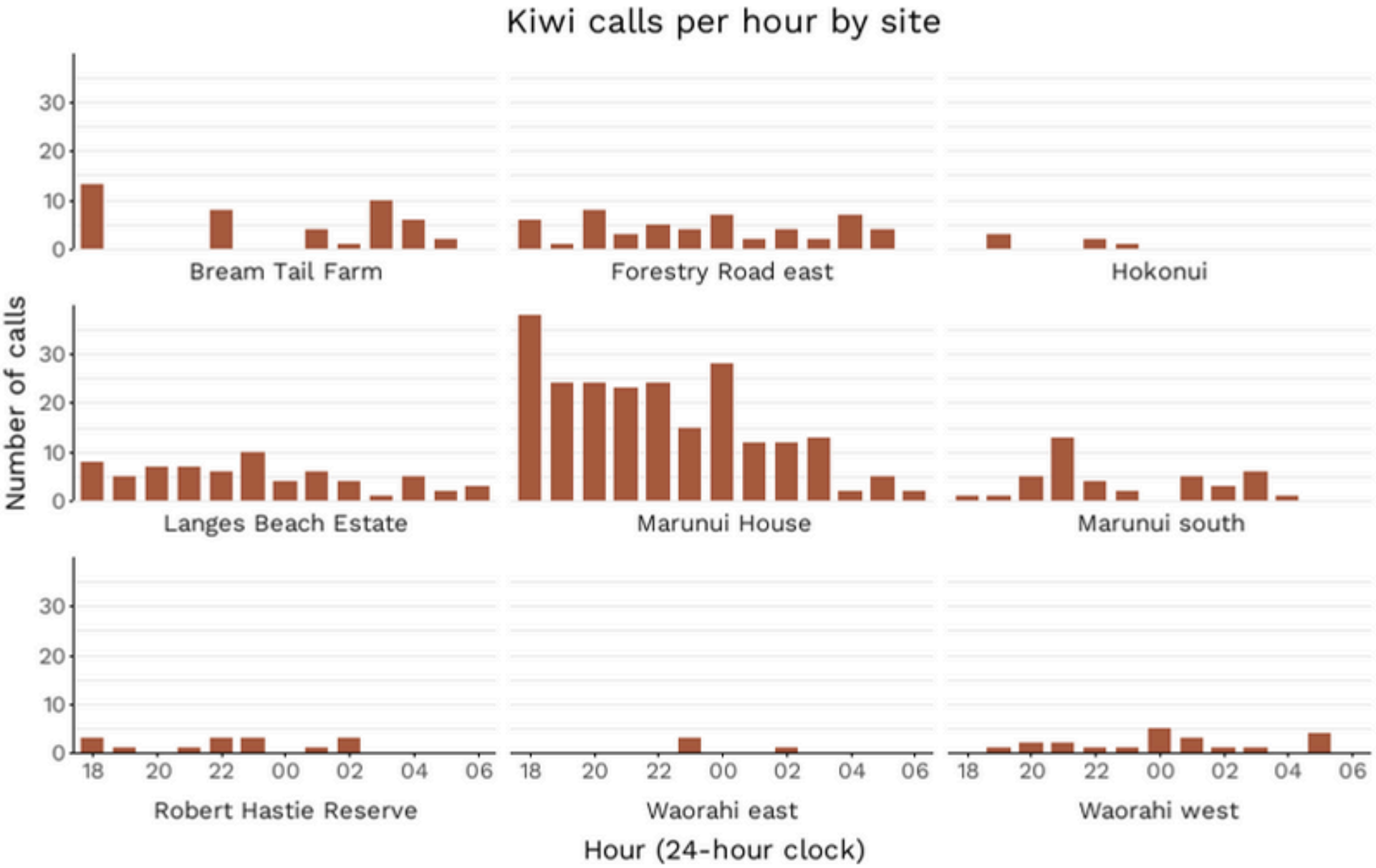
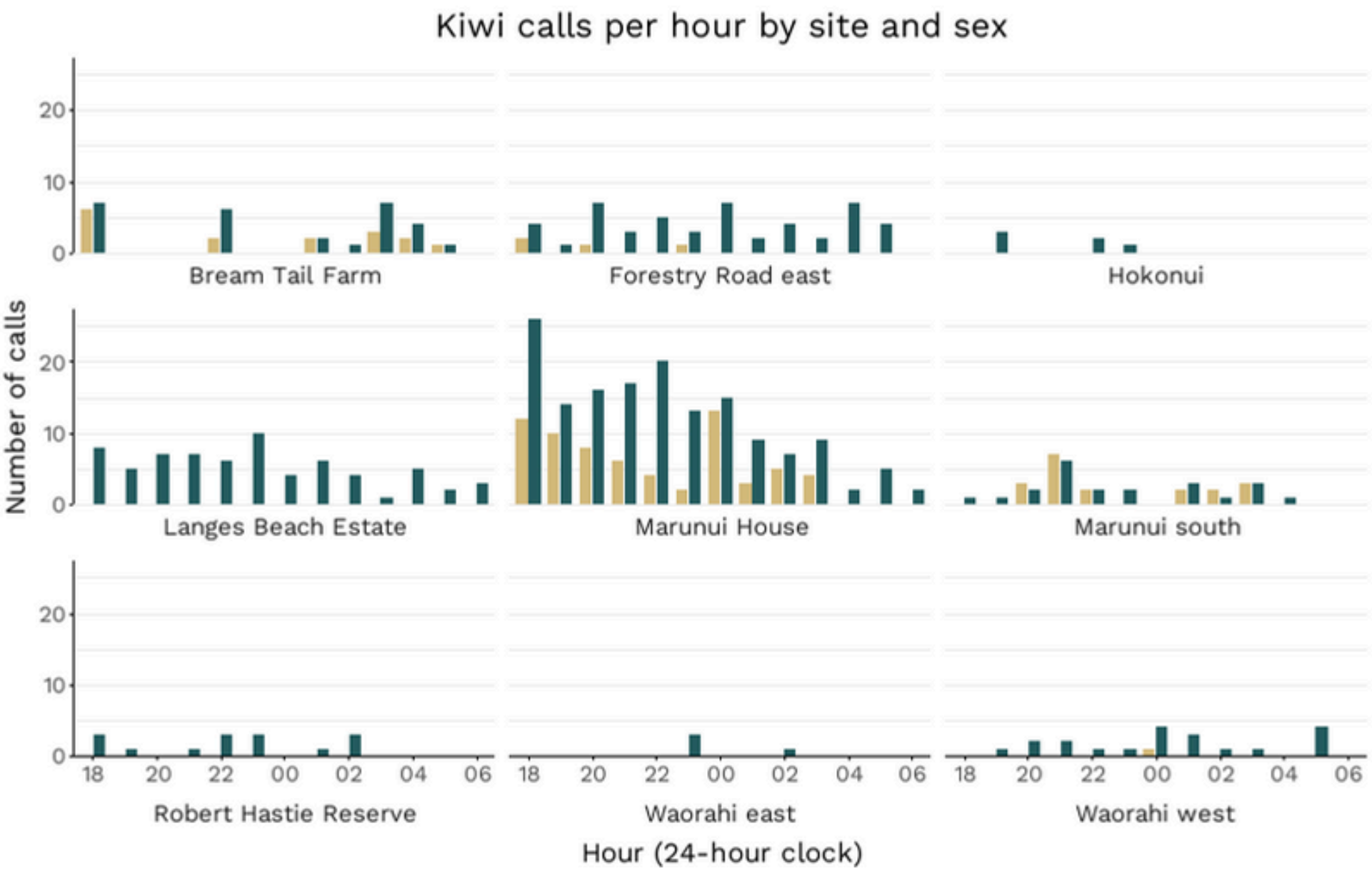


Figure 7 above. Kiwi calls per hour across all ACS sites combined, separated by sex.


Kiwi calls per hour by site
Number of calls
0
10
20
30
Bream Tail Farm
Forestry Road east
Hokonui
Langes Beach Estate
Marunui House
Marunui south
Robert Hastie Reserve
Waorahi east
Waorahi west
18
20
22
00
02
04
06
Hour (24-hour clock)


Kiwi calls per hour by site and sex
Number of calls
0
10
20
Bream Tail Farm
Forestry Road east
Hokonui
Langes Beach Estate
Marunui House
Marunui south
Robert Hastie Reserve
Waorahi east
Waorahi west
18
20
22
00
02
04
06
Hour (24-hour clock)

Call activity varied strongly between locations. The highest number of detections came from Marunui House (222 calls add percentage, including 67 female calls), followed by Langs Beach Estate (68 calls) and Forestry Road east (53 calls). In contrast, sites such as Waorahi east (4 calls) and Robert Hastie Reserve (15 calls) returned very few detections, indicating that kiwi activity is not evenly distributed across the ranges.

For the first time, clear kiwi duets were identified in the ACS dataset. A total of 63 duet events were recorded, most frequently at Marunui House (40 duets), followed by Bream Tail Farm (13) and Marunui South (10). Duets – where a male and female call back and forth – are an important marker of established pairs and breeding behaviour.

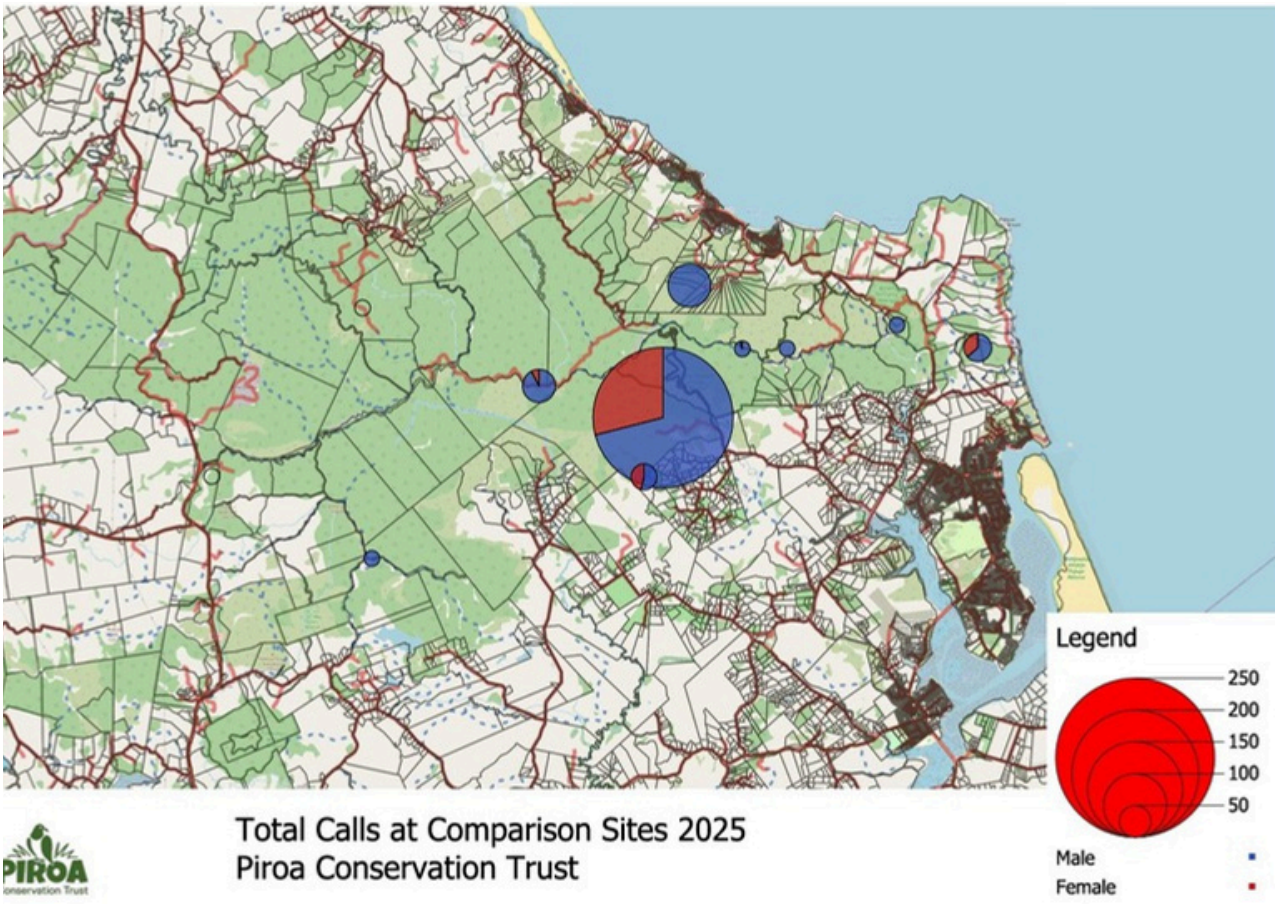


Figure 10 above. Map of total calls at ACS sites in 2024/25, with circle size representing the number of calls and colour showing male/female composition.

Across all ACS sites, call timing followed the usual nocturnal pattern. Activity peaked soon after dark, dropped during the middle of the night, and then rose again in the early morning hours. Call durations ranged from just over 5 seconds to more than 40 seconds, with most between 20 and 30 seconds. This forms a bell-shaped distribution centred around 25 seconds, showing consistency in call structure across the population while allowing for natural variation between individuals.

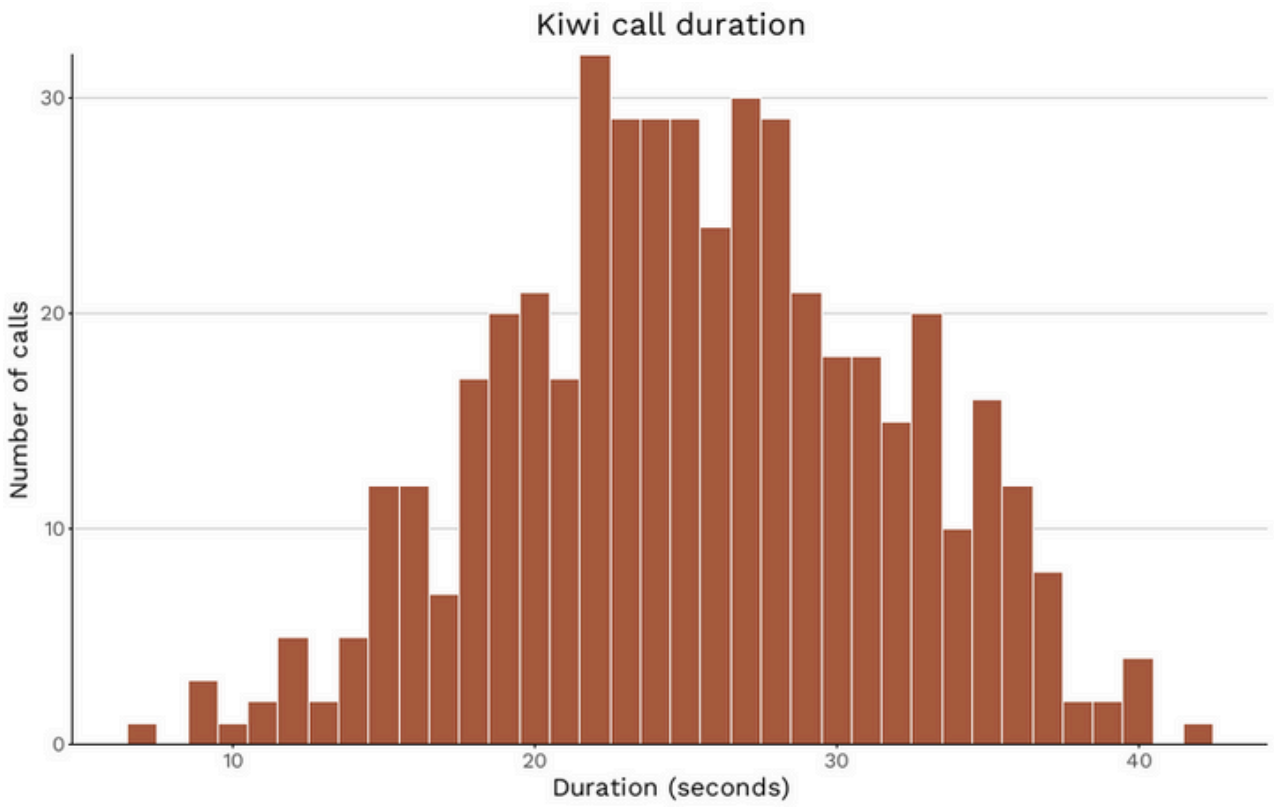


Figure 11 above. Distribution of kiwi call durations across ACS sites in 2024/25.

When looking specifically at the NKCCS window of 6–8 pm, only 22.15% of total calls were recorded in this period. While valuable for standardised comparisons, this highlights that much of the activity in the Brynderwyns occurs outside the national listening window, reinforcing the need for complementary survey approaches.

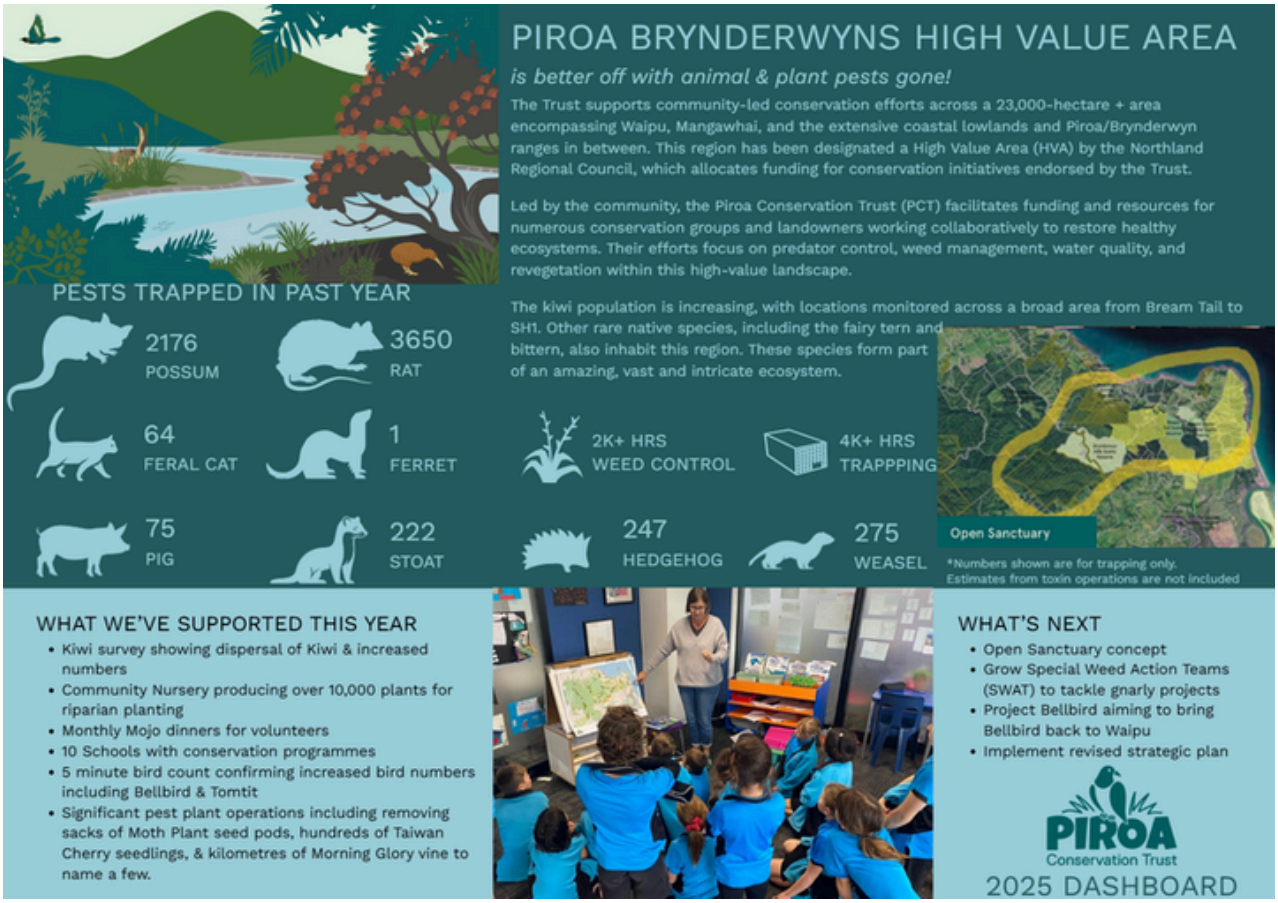
DISCUSSION

The 2024/25 survey provides the most comprehensive picture yet of kiwi across the Piroa–Brynderwyn Ranges. Using a combination of Range-wide Detection Surveys, Annual Comparison Sites, and volunteer listening stations, kiwi were confirmed at 21 locations. Detections spanned podocarp forest, regenerating scrubland, farmland, and exotic forestry. As in previous years, the pattern of detections was uneven: some sites recorded strong call activity, others very few, and several none at all. This is not unexpected. Kiwi are not evenly spread across the landscape, past detections may have included juveniles moving through before establishing territories, and habitat quality varies. Sites without detections remain important, providing baselines against which future expansion can be measured.

Call activity was highest around Marunui and surrounding bushland, the core area where birds were translocated between 2013 and 2015, with further releases in 2020. These strongholds remain central to the current population. However, detections at Langs Beach Estate, Bream Tail Farm, Waorahi, and Robert Hastie Reserve demonstrate that kiwi are regularly being recorded beyond the release sites. Repeated surveys will be important to confirm whether these detections represent birds established territories or individuals moving through.

Marunui's role as a stronghold highlights its importance to the wider Open Sanctuary vision. The Trust's goal of 2,000 hectares under gold-standard predator control will build outward from this nucleus, creating a connected landscape where kiwi can safely disperse into neighbouring farms, forestry, and covenanted land. Achieving this requires not only intensive control but also a more rigorous way of measuring outcomes. Kiwi call surveys confirm presence and spread, but they cannot tell us population size or density.

Likewise, trap-catch tallies show what has been removed, not the true scale of predator populations or how effective control is at the landscape level. To close this gap, the Trust, together with our partners, is developing a broader monitoring protocol. This will bring in tools such as wax tags, tracking tunnels, trail cameras, and expansion of the current bird monitoring (5MBC).
By combining these measures with our kiwi call surveys and trap data, we can start to track outcomes as well as outputs- showing not only that kiwi are present, but also that the wider habitat is gaining strength.



Alongside kiwi call surveys, PCT has accumulated around seven years of predator control output data from trapping and toxin operations. While these records are known underestimates, they provide a consistent index of control effort and can be presented through dashboards or annual summaries. Incorporating this information in future reports will allow a clearer link to be drawn between predator pressure and kiwi outcomes, and also responds to increasing partner interest, such as recent requests for possum trapping data from Te Uri o Hau.

The long-running Kiwi Call Count Survey (KCCS) also provides another valuable line of evidence. A consistent group of volunteers have monitored fixed stations for more than five years, and at Marunui some sites have records stretching back 15–20 years. Although call counts have the same limitations as our own acoustic surveys, this continuity creates an independent, longitudinal dataset. Taken together with the new Annual Comparison Sites and range-wide detection surveys, the KCCS offers a third line of triangulation, strengthening confidence in the trends observed across the Brynderwyn population.

For the first time, duet calls have been incorporated into our results in the Brynderwyns. A total of 63 duet events were identified across the Annual Comparison Sites, most frequently at Marunui House (44 duets), followed by Bream Tail Farm (13) and Marunui South (10). Duets, where a male and female call back and forth, are a strong marker of pair bonding and established territories. While it is not possible to determine the number of distinct pairs at a site- since the same pair may be recorded multiple times- the presence of duets across several locations provides clear evidence of breeding behaviour within the population.

Sex ratio trends add further insight. Male calls were more frequent overall, but the ratio of male-to-female calls improved from 2.1:1 in 2023/24 to 1.8:1 this year. A more even ratio is consistent with a balanced population structure, although this must be interpreted with care since males naturally call more often and their calls travel further. The Annual Comparison Site dataset, which followed national dusk-to-dawn protocols, recorded a stronger male bias (3.4:1). This is consistent with national results reported by the NKCCS and Kiwi Coast listening blitzes, which typically show 2–3 male calls for every female call. Both measures are informative: the combined dataset points to a gradual improvement towards balance, while the ACS protocol provides the most reliable benchmark for long-term monitoring.

Call activity also followed expected nocturnal patterns. The highest number of calls occurred shortly after dusk, with strong activity continuing through the first hours of the night. Activity remained relatively high until around 23:00 before gradually declining through the early morning hours. This reinforces the value of surveys conducted during the national 6–8 pm listening window but also highlights that much of the calling activity in the Brynderwyns continues well beyond this period, underlining the importance of complementary methods such as full-night recorders. Call durations ranged from just over five seconds to more than forty seconds, with most between 20 and 30 seconds. This bell-shaped distribution is typical of brown kiwi and provides a useful baseline for comparison in future years.

Limitations of the survey must be acknowledged. Six devices failed to return usable data, representing a failure rate of 16%. This sits within the typical range reported by other community groups using Automated Listening Devices (around 10–20%) and therefore does not indicate an unusual result, but it did reduce overall coverage this season. Most failures were likely due to battery depletion or water ingress during heavy rain. To reduce this in future surveys, we are strengthening pre-deployment checks, improving weatherproofing, and refining field protocols for volunteers.

Weather conditions, background noise from wind, waterways, or human activity also occasionally interfered with detection. Acoustic data has inherent biases: males call more frequently, and their calls carry further, meaning apparent sex ratios are not a direct reflection of the true population balance. Duet data confirms pair presence but cannot determine how many pairs occupy a site, as the same individuals may be recorded multiple times.

Despite these constraints, consistent methodology across years, the establishment of fixed comparison sites, and the combination of automated and volunteer surveys provide a reliable and increasingly robust framework for detecting long-term trends.

Most detections were in or near areas with intensive predator control, where best-practice trapping and targeted toxin use are applied. This overlap highlights the effectiveness of predator management in supporting kiwi presence. The detections in less intensively managed areas, such as Langs Beach Estate and Robert Hastie Reserve, show where protection could be extended to support dispersing birds and allow new territories to form.

Taken together, these results show that kiwi remain well established around their release sites, are present in new parts of the ranges, and that breeding behaviour is being detected. The addition of Annual Comparison Sites has already strengthened the programme by allowing consistent year-on-year results. Over the next four years of the series, these sites will provide increasingly reliable data to show whether the trends observed this year represent stable population structure and spread, or short-term variation in behaviour.

MANAGEMENT IMPLICATIONS

The survey results confirm the need to continue prioritising intensive predator control around the core strongholds at Marunui, where call rates and duet detections were highest. These areas are critical to sustaining the population.

At the same time, detections at sites such as Langs Beach Estate, Bream Tail Farm, Waorahi, and Robert Hastie Reserve highlight priority areas for maintaining, and where possible extending, predator control to support dispersal and territory establishment. Non-detection sites, while less immediately promising, provide valuable baselines and help identify where further monitoring or habitat management may be required.

The Annual Comparison Site network now provides a framework for detecting population trends over time. These fixed sites will allow sex ratios, duet frequency, and calling activity to be tracked consistently year-on-year, giving the Trust stronger evidence for where to focus effort and how well management is working.

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RECOMMENDATION

- Maintain intensive predator control in the Marunui strongholds to protect established pairs and breeding activity.
- Continue expansion of predator control into peripheral areas where kiwi are being detected to improve the likelihood of successful dispersal and establishment.
- Continue the Annual Comparison Site series for the full five years to build a robust long-term dataset on distribution, sex ratios, and breeding behaviour.
- Revisit non-detection sites in future surveys to track possible expansion and to confirm whether habitat or management interventions are needed.
- Strengthen the link between monitoring and advocacy, using survey findings to guide community trapping, dog control, and awareness of kiwi presence along roads.

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