



Te Komiti mō te Whakarite Mahere, te Taiao, me ngā Papa Rēhia  
**Planning, Environment and Parks Committee**

Te taiao taketake me ngā reiti  
kounga wai kua āta whakaritea  
**Natural environment and  
water quality targeted rates**

Ngā mea hirahira 2022/2023  
**Highlights 2022/2023**

Te Kaunihera o Tāmaki Makaurau  
**AUCKLAND COUNCIL**





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# He kupu nā te Upoko o te Komiti mō te Whakarite Mahere, te Taiao, me ngā Papa Rēhia

E koa ana au ki te whakatakoto i tēnei pūrongo mō te tāpua o tā Te Kaunihera o Tāmaki Makaurau ahu whakamua kia haumanutia tō tātou taiao māori me ngā arawai i te tau 2022/2023.

Nā te kaha o te tautoko mai a ngā tāngata o Tāmaki Makaurau, i whakaetia e Te Kaunihera o Tāmaki Makaurau, mā roto i te Tahua o te 10-tau i te 2018-2028, te \$311 miriona hei reiti whāiti mō te taiao māori e tiakina ai, e haumanutia ai hoki e te kaunihera me ngā mahi e arahina nei e te hapori, ngā pūnaha hauropi māori e noho mātāmua ana me ngā momo e whakaraerae ana. E \$452 miriona atu anō kua herea ki tētahi reiti whāiti mō te kounga o te wai hei utu i te tūāhanga wai hou kia whakapainga ō tātou tāhuna, ngā wahapū me ngā arawai. I a Hune o te 2021, i whakamanatia tā mātou Tahua Whakaoranga mō te 2021-2031, i herea ai he pūtea āpiti mā roto i te whakaroa ake i ngā reiti whāiti mō te taiao māori me te kounga o te wai, mā te whakapiki ake hoki i te reiti whāiti mō te kounga o te wai. Nā tēnei pūtea āpiti, kua taea te tīmata ngā mahi i ngā hōtaka hou e rua e āwhinatia ai te whakatikahanga o ngā take mō te kounga o te wai kua roa e raruraru ana i te kūititanga o te rāwhiti me Te Mānukanuka o Hoturoa.

E whakaatu ana tēnei pūrongo i te āhua o tā ā tātou reiti whāiti tiaki tonu i tō tātou taiao māori, o tāna whakapai ake hoki i te kounga o te wai i te roanga o te 2022/2023, ahakoa ngā uauatanga i hua mai ai i ngā waipuke taikaha, i pā mai rā ki a tātou i tēnei tau.

I te tau tuarima o te reiti whāiti mō te taiao māori, i te taha o ngā mana whenua me Te Papa Atawhai, ka tīmata tā mātou whakahaere i tētahi uiui aroturuki i te hauora o ngā kauri i Te Ngāherehere o Kohukohunui. He kokenga whakahirahira tēnei i te whakaūnga o te korenga tonu o tēnei taonga e pāngia e te mate patu kauri i tētahi o ngā ngāhere kauri nui katoa, e ai rā ki te kōrero, o ērā o te motu kāore anō kia pāngia e te mate patu kauri.

Ka rawe hoki te kitea o ngā rōpū tiaki taiao, e arahina nei e ō tātou hapori, o ngā kura taiao hoki e tipu ana ahakoa ngā āwhā me te horapa o ngā waipuke. I hipa ake i te 100 ngā kura o te rōpū kaitiaki, o Trees for Survival, nā te urunga o ētahi atu kura e iwa ki tā rātou hōtaka taiao, ka mutu, nā te mahi a ngā kaitiāo e 3650, kua tata ki te 90,000 te maha o ngā tipu māori kua whakatōngia.

I te tau tuarima o te reiti whāiti mō te kounga o te wai, ka tīmata tā mātou whakawhānui ake i te hōtaka mō Te Whakapainga ake o te Kounga o te Wai ki te Kūititanga o te Taiuru i Grey Lynn ki Pt Erin Park. Mā tēnei e 1.4km te roa ake o te 14km o te kōtuinga e tāpua ai te pai ake o te kounga o te wai i Herne Bay, i St Mary’s Bay, i ngā tāhuna hoki o te raki. I arotahi tonu hoki mātou ki te whakapainga ake o te taiao mō ngā mahi ā-rēhia me te kaukau hei painga mō ngā tāngata o Tāmaki Makaurau, ā, i neke atu i te 8000 ngā rawa wāhi i tirotirohia mō te whakatahe te take, tae atu ki te whakamātautanga o ngā putanga wai ua 130 puta noa i ngā tāhuna e 25.

E whakaae ana au ki te noho a ngā mana whenua hei kaitiaki, hei rangatira hoki mō ō rātou whenua tūpuna, ā, e mihi ana au ki a rātou i tā rātou noho hei hoa patui, i ā rātou mahi hoki hei haumanu i te mauri o te taiao. E titikaha ana tā mātou tautoko tonu i ngā mana whenua kia āta whakaū rātou i tā rātou tū hei kaitiaki i te taiao.

E mihi ana hoki au ki ō tātou hapori me taku whakamānawa i ngā mahi whakamīharo kua oti i a rātou hei āwhina i tā mātou whakatutuki i ngā tūmanako mō te taiao me te kounga o te wai.

Ko te waipuke o te 27 o Hānuere me Huripari Kaperiere ētahi āhuetanga kāore i kitea i mua, ā, nā ēra i tino raruraru ai ō tātou hapori me ngā hōtaka whakahirahira a te kaunihera, nō reira, ko tā mātou whakaputa tonu i ngā hua tuawhiti mō te taiao me te kounga o te wai tētahi taunakitanga mīharo i te pai o ā mātou tīma, ko te tokomaha nei hoki o rātou i tūao ki te āwhina i te whakaoranga.

## **Richard Hills**

Te Upoko o te Komiti mō te Whakarite Mahere, te Taiao, me ngā Papa Rēhia

# Message from Planning, Environment and Parks Committee Chair

I am pleased to introduce this report on the significant progress Auckland Council has made towards restoring our natural environment and waterways in 2022/2023.

With strong support from Aucklanders, Auckland Council, through the 10-year Budget 2018-2028 approved \$311 million for a natural environment targeted rate for council and community-led action to protect and restore priority native ecosystems and threatened species. Another \$452 million was committed for a water quality targeted rate for new water infrastructure to clean up our beaches, harbours and waterways. In June 2021, we adopted our Recovery Budget for 2021-2031 which committed additional funding through extending both the natural environment and water quality targeted rates and increasing the water quality targeted rate. This additional funding has allowed us to start work on two new programmes which will help to resolve long-term water quality issues in the eastern isthmus and Manukau Harbour.

This report shows how our targeted rates continued to protect our natural environment and improve water quality throughout 2022/2023, despite the challenges caused by the severe flooding events this year.

In year five of the natural environment targeted rate, alongside mana whenua and the Department of Conservation, we began conducting a health monitoring survey of kauri in Te Ngāherehere o Kohukohunui (Hunua Ranges). This is a crucial step towards confirming that this taonga is still free of kauri dieback in what is believed to be one of the largest disease-free kauri forests in the country.

It is also fantastic to see our community-led conservation groups and Enviroschools experiencing growth even in the face of storms and widespread flooding. Trees for Survival broke the 100 mark this year, adding nine more

schools to their environmental programme and, with the mahi of 3650 volunteers, planted nearly 90,000 native plants.

In year five of the water quality targeted rate, we began working on extending the Western Isthmus Water Quality Improvement program from Grey Lynn to Pt Erin Park. This will add a further 1.4km to the 14km network which will substantially improve water quality for Herne Bay, St Marys Bay, and northern beaches. We also continued our focus on improving the recreational and swimming environment for Aucklanders, with investigations for drainage issues reaching over 8000 properties, including the testing of 130 stormwater outlets across 25 beaches.

I acknowledge mana whenua as kaitiaki and rangatira of their ancestral lands and thank them for their partnership and work in restoring the mauri of te taiao (the environment). We are committed to continue supporting mana whenua to actively exercise kaitiakitanga of te taiao.

I also acknowledge our communities and thank them for the amazing mahi they have contributed this year to achieving our environmental and water quality aspirations.

The 27 January flooding and Cyclone Gabrielle were unprecedented events that caused huge disruption for our communities and important council programmes, so it is a wonderful testament to our teams, many who volunteered their time to assist with the recovery, that we still delivered exceptional environmental and water quality results.

## **Richard Hills**

Planning, Environment and Parks Committee Chair

# Reiti taiao taketake kua āta whakaritea

## Natural environment targeted rate



**Plant pathogens**  
**4.7km** of tracks upgraded in local parks and **12.1km** of tracks upgraded in regional parks  
**12** new hygiene stations installed in our local parks  
**500+** points surveyed as part of the Hunua Ranges kauri health baseline survey



### Marine ecology

**16** seabird species were monitored/researched this year to assess population trends



### Islands

**180** stoats caught to date by Te Korowai o Waiheke and partners  
 Native birds on Waiheke increased by **22 per cent** between 2020 and 2022

**252** low incidence pest plant sites on Aotea / Great Barrier Island and **15** sites across the inner Hauraki Gulf islands are under management with the aim of complete eradication



### Marine and pathways

**8** pest detection dogs and their handlers worked to target pest species – Argentine ants, rodents, stoats and kauri dieback

**711** scheduled vehicle ferry sailings inspected, **82** scheduled passenger sailings and **60** unscheduled charter sailings inspected

**1383** vessel hulls inspected for marine pests last year

### Expanding community action



**457** community-led conservation initiatives supported, including:

- **\$625,000** awarded to **35** successful applicants through the Community Coordination and Facilitation Grant with an additional **\$418,000** awarded from Healthy Waters
- **\$434,000** value of supplies provided to **120** conservation groups, for pest animal and weed control, ecological monitoring and equipment



### Biodiversity Focus Areas

**51** long-tailed bat roosts detected in Franklin

**10** threatened plant species targeted for survey across the region and **1730** new threatened plant records identified



### Mainland

**2579ha** of pest plant control in regional parks  
 Delivered **23,000ha** of ground-based possum control across the region and over **20,000ha** of aerial possum control in the Hunua Ranges



### Enabling tools

**215,000+** page visits to conservation information on the Tiaki Tāmaki Makaurau / Conservation Auckland website

# Reiti kounga wai kua āta whakaritea

## Water quality targeted rate



### Southern catchments alignment

**4.6km** of combined wastewater and stormwater pipes identified for separation  
**367** properties to benefit from identified separation works

### Western isthmus water quality improvement

**8.82km** of combined wastewater and stormwater pipes identified for separation  
**688** properties to benefit from identified separation works



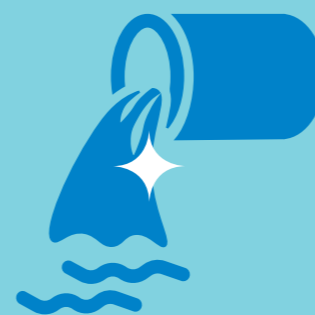
### Eastern isthmus water quality improvement

Separation inspection work completed at properties across **9** streets in Newmarket  
**510m** of stormwater network to be extended and renewed in Khyber Pass



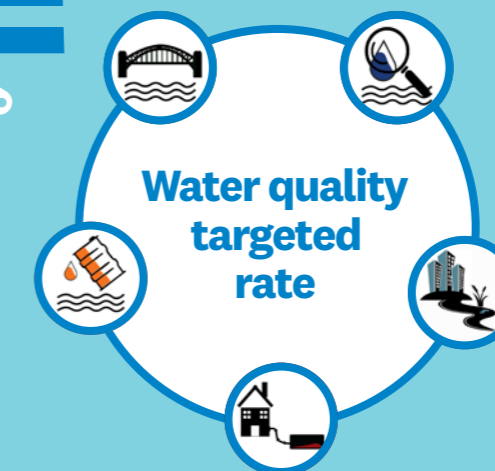
### Safe Networks

**130** stormwater outlets tested across **25** Safeswim sites  
**8180** properties visited to inspect private drainage connections



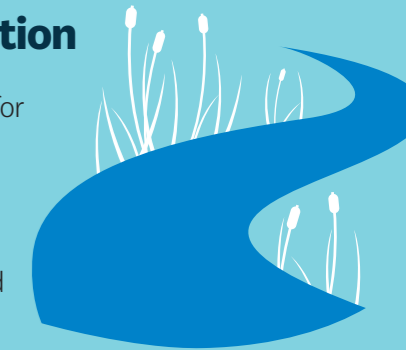
### Contaminant reduction

**60** businesses joined the Industrial and Trade Activity Proactive Programme pilot  
 Supported Sea Cleaners to remove **1.5 million** litres of litter from coastal waters



### Urban and rural stream rehabilitation

Over **\$740,000** funding for allocated to grant recipients  
**51ha** of riparian areas, **34km** of waterways and **13ha** of wetlands protected through co-funding



### Safe Septic

**494** faulty systems repaired following compliance investigation  
**389** systems under active monitoring by compliance for repair

# Ngā reiti kua āta whakaritea mā tō tātou rohe

## Targeted rates working for our region

### Water quality targeted rate programmes

#### Urban and rural stream rehabilitation

We're investing to restore local waterways across the region, and to support the work of local communities.

#### Safe Networks

We're investigating issues with our water networks and identifying solutions to make popular Safeswim sites more swimmable.

#### Southern catchments alignment

We're improving water quality in the Manukau Harbour by aligning the timing of stormwater improvements with other scheduled major infrastructure projects.

#### Eastern isthmus water quality improvement programme

A major infrastructure programme that will significantly reduce wastewater overflows and improve water quality from Hobson's Bay to St Heliers.

#### Contaminant reduction

We're preventing litter and road pollutants from entering waterways in urban areas, and in rural areas the focus is on reducing sediment and erosion along our waterways.

#### Western isthmus water quality improvement

A major infrastructure programme that will significantly reduce wastewater overflows into the Waitematā Harbour and reduce stormwater volumes going into the Manukau Harbour.

#### Safe Septic

We're introducing a regional inspection and maintenance regime for properties with onsite wastewater systems.

#### Islands (NETR)

Taking action to reduce pest plants and pest animals to protect unique island ecosystems and native species.

### Natural environment targeted rate programmes

#### Plant pathogens

Investing to reduce the risk of spread of plant pathogens threatening native species, in particular kauri dieback.

#### Expanding community action

Supporting community conservation, environmental innovation and Māori-led projects.

#### Biodiversity Focus Areas

Protecting a range of species and ecosystems.

#### Mainland

Increasing pest plant and pest animal control in and around public parks and in important habitats on private land.

#### Enabling tools

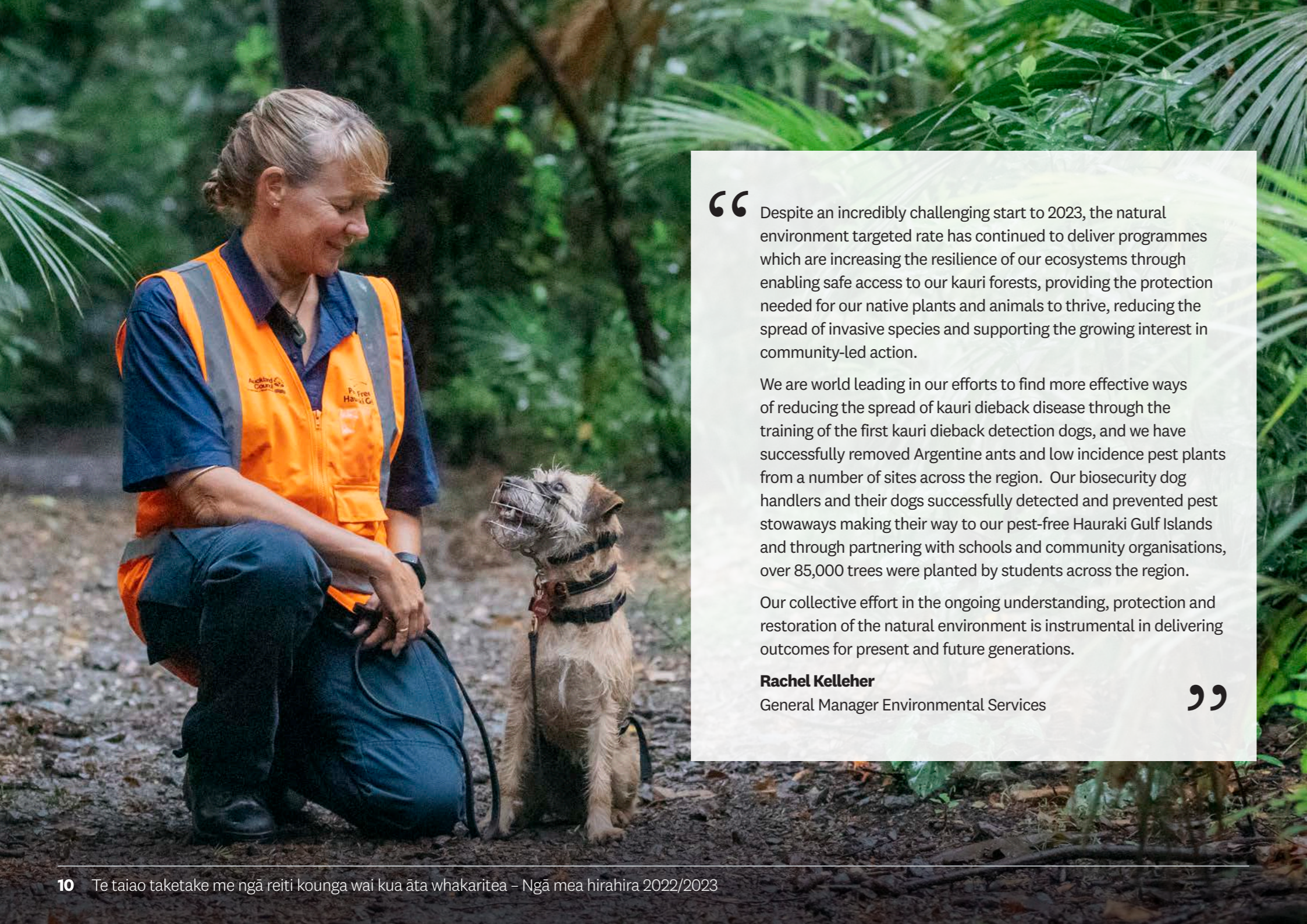
Improving data management and developing digital tools for connecting Aucklanders with conservation activities.

#### Marine and pathways

Managing and educating about pest pathways and preventing pest spread.

#### Marine ecology

Conducting research into marine habitats and seabirds so we can better protect them.



“ Despite an incredibly challenging start to 2023, the natural environment targeted rate has continued to deliver programmes which are increasing the resilience of our ecosystems through enabling safe access to our kauri forests, providing the protection needed for our native plants and animals to thrive, reducing the spread of invasive species and supporting the growing interest in community-led action.

We are world leading in our efforts to find more effective ways of reducing the spread of kauri dieback disease through the training of the first kauri dieback detection dogs, and we have successfully removed Argentine ants and low incidence pest plants from a number of sites across the region. Our biosecurity dog handlers and their dogs successfully detected and prevented pest stowaways making their way to our pest-free Hauraki Gulf Islands and through partnering with schools and community organisations, over 85,000 trees were planted by students across the region.

Our collective effort in the ongoing understanding, protection and restoration of the natural environment is instrumental in delivering outcomes for present and future generations.

**Rachel Kelleher**  
General Manager Environmental Services

”

# Wāhanga Tuatahi: Reiti taiao taketake kua āta whakaritea

## Section 1: Natural environment targeted rate

The natural environment targeted rate (NETR) provides substantial additional investment, along with business as usual funding from general rates, to protect and enhance our natural environment. This funding enables us to deliver on our Regional Pest Management Plan, the council’s Indigenous Biodiversity Strategy, and our responsibilities under the Biosecurity Act, Local Government Act, and other legislation, plans and strategies.

Some of the work enabled by NETR includes:

- significantly increasing weed and pest animal control in and around local and regional parks, and important habitats on private land to enable indigenous species to thrive
- reducing the spread of kauri dieback disease and other plant pathogens

- providing greater protection for indigenous ecosystems and species, including on the terrestrial mainland and in the islands and marine and freshwater environments
- developing better systems and support to empower community-led stewardship of the natural environment.

This year, key programmes included a baseline survey of kauri health in Te Ngāherehere o Kohukohunui / Hunua Ranges, controlling mammalian pests and pest plants, deepening our understanding of threatened species in the region, and enabling and partnering with mana whenua and communities on survey and biodiversity management activities.

## Protecting a range of species and ecosystems

# Hōtaka: Ngā Wāhi ā-Kanorau Koiora ka Aronuitia Programme: Biodiversity Focus Areas

This programme aims to protect the full range of ecosystems and species in Tāmaki Makaurau and guide the delivery of biodiversity management across both council and private land.

- We collaborated with mana whenua to complete a survey of 10 threatened plant species across 30 sites. Numerous new threatened plant records were identified across new locations, including a significant population of rōhutu (*Ophomyrtus obcordata* / tutuhi) at Woodhill.
- We ran targeted pest plant control at various key sites across the region, specifically where rare and threatened native plants and ecosystems are found. These sites require a more intensive or specialised approach to manage pest plant threats without damaging these sensitive values. With the completion of updated regional threat assessments for native plants this year, we anticipate an increase in the number of targeted control sites in coming years.
- The pekapeka-tou-roa (long-tailed bat) survey was delivered for a second year across the Franklin Local Board area as part of the Finding Franklin Bats project. Supported by both NETR and Franklin Local Board funding, Ecoquest carried out this survey across privately owned forest fragments. Te Ara Hikoi (Predator Free Franklin), Ngati Te Ata, Ngati Tamaoho and Ngai Tai ki Tāmaki provided significant support and input. This work enhances our understanding of bat locations throughout Franklin and the results will be used to prioritise critical habitats for management.

- We continued surveying in an effort to discover another population of the threatened Muriwai gecko and Tātahi skink. We collaborated with Te Uri o Hau and Nga Maunga Whakahii o Kaipara, the Department of Conservation, New Zealand Defence Force, and Auckland Zoo in a multi-day survey of potential habitats within the Papakanui Conservation Area, South Head, and on Manukapua Island, Tāpora. While there were no new observations of Muriwai gecko, we recorded several Tātahi skinks.
- We ran a census of the giant kōkopu population on Waiheke Island using 30 nets for sampling juveniles and two nights of spotlighting to count adult fish. We found 15 giant kōkopu adults through spotlighting and one juvenile through the nets, though the survey was only partially successful due to low water clarity. These results will be used as a baseline record to assess population changes over time alongside management interventions.
- We initiated three research projects this year. The first was an analysis of mammalian predator diet in Five Mile Strip, Muriwai. This will investigate which species are preying on Muriwai gecko and Tātahi skink. We are also collaborating with university students on two other projects that will improve our understanding of species ecology. The findings will allow us to adapt our management approaches accordingly to integrate site specific species protection.

## Case study: Regional conservation threat assessments

Understanding the status, trends and threats for threatened species is crucial to informing conservation decisions. We have used a Regional Threat Classification System, an extension of the New Zealand Threat Classification System developed by the Department of Conservation. This helps regional and district councils fulfil their legal obligation under the Resource Management Act to manage threatened species' habitats and is a critical step for achieving the council's Indigenous Biodiversity Strategy objectives.

Conservation status assessments in Tāmaki Makaurau form an essential part of our threatened species work programme. These are compiled through collating comprehensive information of our threatened species. The information is used to prioritise species management, research, monitoring, and natural resource management decisions. It also provides opportunities to work collaboratively with community-led restoration groups and in partnership with mana whenua.

Over the last two years, we've examined various species groups including reptiles, amphibians, vascular plants, and bats. For the upcoming year, our plan includes assessments of birds and freshwater fish. These assessments are carried out by a skilled panel comprised of our internal team, specialist contractors, Department of Conservation staff and academic experts from various universities.

This concerted effort enables us to expand our knowledge on indigenous species, prioritise management actions, and collaborate with other agencies and partners to bolster conservation efforts. It assists restoration projects in identifying species of conservation concern and provides valuable local input to the national assessments of species.

## Hōtaka: Ngā iro kitakita ā-otaota Programme: Plant pathogens

The plant pathogens team works with mana whenua, scientists, industry and community to protect our iconic trees and their supporting ecosystems from the impacts of kauri dieback disease and myrtle rust as well as reviewing emerging threats.

### Improving and upgrading our tracks

- This year, we progressed our track improvement programme to protect kauri. We upgraded 12.1km of tracks in regional parks and 4.7km in local parks, enhancing safe and responsible access to our ngahere. We made key improvements in well-visited local parks like Alice Eaves, Gills and Kowhai Reserves which have now reopened to the public.
- Tracks previously upgraded to protect kauri generally fared well through the January and February storm events except for some major slips in the Waitākere Ranges Regional Park and the Kaipātiki Local Board. This delayed the re-opening of the Kuataika-Houghton tracks and Auckland City Walk which were otherwise completed. Some other tracks were damaged and will need further investigation or repairs before reopening, including the Gibbons, Muir and Zig Zag tracks.
- We installed 12 new hygiene stations across the track network and one bike hygiene station in the Hunua Ranges Regional Park.

### Biosecurity champions promote responsible exploration of the ngahere

- A team of Biosecurity Champions, including kaimahi from Te Kawerau ā Maki, engaged with park visitors at select sites known for their biodiversity values and high visitation rates. They encouraged responsible exploration of the ngahere and adherence to essential biosecurity measures, such as avoiding soil transportation and following the ‘scrub, spray, and stay on track’ guidelines. The team illustrated how considered actions by each visitor can contribute to the preservation of kauri and native forests.

### Rangatahi internship cultivates mana whenua capabilities

- We co-funded a rangatahi internship in partnership with Te Korowai o Papatūānuku and the Ministry for Primary Industries (MPI). This initiative provides a Ngāti Te Ata rangatahi with practical experience in nursery production, revegetation, pest control, and mitigation of myrtle rust. The intern will earn a Level 3 Certificate in Nursery Production and gain invaluable expertise in managing threatened species and addressing myrtle rust. This programme bolsters mana whenua capabilities and looks to incorporate mātauranga Māori with contemporary knowledge to enhance biosecurity practices.





### Funding a faster tool to detect kauri dieback

- We funded the first step towards creating a new rapid diagnostic tool to detect *Phytophthora agathidicida* (PA), the pathogen that causes kauri dieback disease. This tool could provide confirmation of a suspected case identified by our detector dogs. This is important because current testing tools take several weeks to deliver results. This lengthy process has been a barrier in testing high-risk goods like earthmoving equipment at ferry terminals before transit to some of our last kauri dieback free locations. The research was successful and shows great promise in contributing to our efforts to minimise spread of the pathogen, although more investment is required to move beyond the proof of concept stage.

### Refining and standardising soil sampling

- Data from our soil samples are foundational to understanding the presence of PA in the Auckland region. Their reliability is crucial as results have direct implications for land management and implementation of the national pest management plan for PA. We teamed up with the national kauri protection agency, Tiakina Kauri, and MPI Plant Health and Environment Laboratory to refine our soil sampling and laboratory analysis protocols and limit cross-contamination risks. Standardisation of process across field teams and laboratories is essential to improving the consistency and accuracy of our soil sample results. These enhancements have already been applied in both the field and laboratory with great success.

## Case study: Kauri health survey in Te Ngāherehere o Kohukohunui / Hunua Ranges

Auckland Council is partnering with several ngā iwi mana whenua o Te Ngāherehere o Kohukohunui and the Department of Conservation in conducting a baseline survey of kauri health in Te Ngāherehere o Kohukohunui / Hunua Ranges. We hope the survey will confirm that this forest is still free of the PA pathogen. The Hunua Ranges are believed to be one of the largest disease-free kauri forests in the country.

Combined with its massive **2021 sister survey in the Waitākere Ranges**, carried out in partnership with Te Kawerau ā Maki, the twin population health surveys operate at a previously unseen scale for kauri. Principal Biodiversity Advisor Alastair Jamieson acknowledges the importance of “kauri as an iconic species in New Zealand”, and ngā iwi mana whenua o Te Ngāherehere o Kohukohunui affirm that “it’s more than a population of trees growing on land, it’s a population of culturally significant taonga that have survived historical land clearance and logging.” Information from the survey will be used to inform management decisions into the future.

Lisa Tolich, Team Manager Kauri Dieback, says that walking alongside mana whenua from the outset has enriched the programme and created beneficial outcomes that will be realised for years to come. “They have chosen to partner with us through the entire design and delivery of the survey. This includes setting the objectives of what we want to achieve, designing the actual survey, having mana whenua representatives on the steering group and putting forward members of their iwi to work alongside our contractor, in a Tuakana-Teina / mentor-mentee model in the field.” Tikanga is central to this mahi and is part of day-to-day operations.

The team says that the partnership approach has worked so well that they hope it will inform future projects at the council and be used as an example externally.



## Hōtaka: Te tuawhenua Programme: Mainland

The natural environment targeted rate has enabled us to significantly increase control of priority pest plants and animals in priority ecosystems in and around the regional and local parks of Tāmaki Makaurau, including selected freshwater lakes.

### Large scale aerial survey for feral deer and goats

This year, we conducted helicopter aerial surveillance over 91,000ha of the Auckland region, employing thermal imaging technology to survey for feral deer and goats. This approach has given us more data on the population distribution and density of these species, providing insights far beyond what traditional ground surveillance methods could achieve. It will significantly improve our ability to manage these pest species.

### Pest plants and animals banned from sale

The Regional Pest Management Plan 2020-2030 (RPMP) bans the sale of plants and animals that can escape from homes to become pests in the wild. In September 2022, rules came into effect regarding the sale, propagation/breeding and distribution of a new set of pests. This included the invasive bangalow palm following two years of educational visits to nurseries and pet shops.

We conducted over 580 inspections at nurseries, pet shops, breeders, florists, markets, and online sales in the last year. Most businesses now know about the rules and are positive about these visits as they want to do the right thing to protect our environment. This work will reduce the spread of these pests into new areas.

### Project Hunua successfully delivers enhanced pest control

We continued pest control in the Hunua Ranges this year with successful treatment of over 21,500ha using aurally applied 1080, with good support and participation from adjoining landowners. The operation achieved a significant reduction in possums and rats with post operation monitoring showing extremely low numbers (0.17% possum residual trap catch and 0.83% rat residual trap index, with targets being < 2% and < 3% respectively). Our testing of water reservoirs showed no traces of 1080 were present before these reservoirs were reconnected to the public water supply.

Positive effects of the three most recent aerial operations in Hunua are evident in the five-yearly kōkako census results. The 2022 count identified 259 kōkako pairs, a remarkable growth from 55 in 2015 and 116 in 2018. The latest census included pairs which are extending their territories and successfully breeding in park areas managed solely through pulsed aerial control. Following the 2022 operation, the Hunua Project was recognised by the national kōkako recovery programme as reaching the status of 'genetically robust' and is the second kōkako population in the country to reach this milestone. This is a significant contribution to the prosperity of this threatened species.

### Controlling pest plants on land buffering parks

The RPMP includes rules for managing certain pest plants in defined buffer zones surrounding ecologically important parkland. The aim is to reduce reinvasion of these pests to these parks. This project targets a small selection of the most invasive pest plants, with the most difficult to control being funded by council for their initial management. In the last year, we surveyed and ran initial control measures on 470ha of land. This area was spread over 18 locations across Auckland and covered 1700 properties. We continue engaging with landowners or occupiers around their requirements to ensure continued pest plant control.

### Controlling low incidence pest plants

Eradicating pests before they become widespread is an extremely cost-effective way to prevent future impacts and control costs. We target certain pest plants for eradication because they have not yet established widely in Auckland. We control around 30 of these low incidence pest plant species across the whole region and around another 30 specifically on Aotea / Great Barrier Island. For the whole-of-region species, last year we moved 21 infestation sites from active into a monitoring phase as no more plants were being found. We also declared 20 infestation sites to have been eradicated. This shows some good progress towards eradicating some of these species from the region.



### Expanding our ground-based possum control

Possoms cause significant damage to native ecosystems. They consume the leaves of native trees and deplete bird populations by destroying their habitats and food sources or, in some cases, by preying on the birds directly. As well as supporting the community to control possums, we control possums across many high priority ecosystems. During the last year, we carried out ground-based possum control across 23,000ha of rural land. This included a new site in the Manukau Lowlands to complement the good work being undertaken by the community,

### Maintaining weed control on regional parks

The Regional Parks team and contractors delivered 2579ha of weed control this year. This enabled us to maintain 6565ha or around half of high biodiversity value ecosystems on regional parkland at levels where native species can thrive. These are very good results given the challenges of an unusually wet summer and autumn reducing the number of viable working days, and Cyclone Gabrielle causing infrastructure damage and limiting access to sites.

## Case study: Pest fish control to protect water quality and biodiversity at Lake Tomarata

Lake Tomarata used to be one of the best examples of native lake ecosystems in Tāmaki Makaurau. The water quality, however, is now in decline.

It is one of the few remaining Auckland lakes containing native submerged plant communities and kākahi (native freshwater mussels). It also provides significant habitat for native birds and the threatened black mudfish.

In the last 15 years the native submerged plants have all but disappeared and the kākahi population has significantly declined. These species are important in maintaining good water quality in the lake.

Pest fish, such as rudd and tench, are likely responsible for the decline in lake health. These introduced fish can have major effects on water quality by disturbing sediment, preying on native species, and causing algal blooms. Some pest fish are

herbivorous and graze on the submerged native plants. Others predate native animals such as kākahi and native fish.

With assistance from the University of Waikato, we have been removing pest fish from Lake Tomarata. This aims to improve lake health and protect this valuable habitat for native species and recreation. Ngāti Manuhiri support the pest fish removal and have given cultural inductions to all staff working on this project.

We deployed nets every 50m across the lake over two weeks in August 2022 and one week in April 2023. The total catch comprised 198 tench and 904 rudd. Statistical modelling shows that netting is starting to have a significant impact on pest fish numbers and population dynamics. The fishing team will be back at the lake in August 2023 to remove more pest fish before they are able to spawn this spring. We will monitor the lake over summer to see if the fish removals are helping the recovery of native plant and kākahi communities.



## Hōtaka: Ngā moutere Programme: Islands

### Argentine ant eradication on Kawau and Aotea / Great Barrier Islands

After 10 years of control and monitoring, this was the first year we didn't detect Argentine ants within the 23ha site at Vivian Bay on Kawau Island. A small population south of this area is now being targeted for eradication.

The Aotea invasive ant programme was also successful this year with the technical advisory group declaring four sites totalling 57ha free of the ants. This is nearly half of the area actively managed for Argentine ants on Aotea. This includes the 20ha Sandhills Road site, the 5ha Okupu site, the 2ha Mason Road site, and the 30ha Mulberry Grove site which is the largest known area in Aotearoa to have been successfully eradicated. In another win for Aotea, no Darwin's ants were detected at previously active sites at Whangaparapara Wharf, Claris clay fill site or Oceanview Road.

### Protecting Grey Group Islands from rats

Over the past year, our monitoring detected no rats on 11 of the 12 Grey Group Islands along the coast of Aotea / Great Barrier Island. Te Manu, Saddle and Motu Rako Islands have been rat-free over eight years. No rat captures have been recorded on Opakau Island since ship rats were eliminated in 2020.

### Low rabbit densities on Aotea / Great Barrier Island

Rabbit monitoring following our control work has recorded the lowest counts since management began in 2013. Prior to our control work starting, parts of Aotea were recording the highest rabbit numbers in Aotearoa, even exceeding those in central Otago. Young rabbits are likely to be a main source of food for feral cats on this island and this helps determine the densities of feral cats in unforested areas. Ecosystems and fauna such as dune lands and vulnerable plant populations have benefited from regular and ongoing rabbit control.

### Low incidence pest plant work on Aotea- / Great Barrier Island

The island is home to unique biodiversity, making it essential to prevent invasive pest plant establishment. The ability to defend islands presents a unique opportunity to eradicate and control low incidence pest plants, with climbing asparagus on Aotea illustrating this potential. Even as one of the most invasive species, its low numbers mean we could prevent it from spreading across the island. Our teams grid searched over 200ha of potential habitat, finding only 23 seedlings and one mature plant. By intervening early we are safeguarding the unique biodiversity of Aotea / Great Barrier Island.

### Feral pig eradication on Waiheke Island

While surveillance and communication with landowners and residents has suggested success in feral pig eradication on Waiheke, a recent report of a pig damaging vineyards initiated a pest incursion response. A feral pig was removed, although further reports are being investigated. We will continue to follow up to prevent feral pigs from damaging Waiheke's natural environment and agricultural production.

### Kawau Island feasibility study

We commenced work to assess the technical feasibility and social acceptance of removing mammalian pests from Kawau Island.

The proposed eradication project would work with iwi and the community to find solutions to the challenge of removing mammalian pests from a residential island and keeping them off.

### Eradicating stoats from Waiheke Island

Te Korowai o Waiheke stoat eradication programme (see case study) eliminated over 9200 pests across 9200ha, using 1650 traps. While the main target was stoats, with 180 removed to date, a significant number of hedgehogs and rats made up the final tally. This unexpected benefit aligns with the goal of Te Korowai o Waiheke for a thriving natural environment on Waiheke where native species can thrive.



## Case study: Supporting community-led conservation on islands

Te Korowai o Waiheke is a charitable trust established by the community to eradicate stoats and rats and enable Waiheke's native birds to flourish. Auckland Council works in partnership with the trust on this mission.

The island-wide stoat eradication is progressing well with stoats now down to low numbers and genetic analysis detecting only two to four breeding females remaining on the island. A community stoat sighting campaign and stoat detection dogs have been important tools to identify stoat locations. The current 'detect and respond' phase of the programme introduces new traps and lures and adjusts the trap servicing frequency. These measures specifically target the remaining stoats.

Operational trials for rat control in 2022 focused on discovering what would be needed to remove rats from challenging habitats such as mangroves, industrial sites, commercial areas and coastal cliffs. The Ostend trial using bait stations was successful in removing rats from a complex area and used innovative floating bait stations for the mangrove and wetland areas. The Kennedy Point trial proved that traps are an effective control tool but cannot completely remove rats. Servicing the traps on coastal cliffs with a qualified ropes team was effective but very time and resource-heavy. The 2023 rat operational trial is currently underway in Oneroa, the most populous suburb of the island with a high density of hospitality and holiday home properties.

During all rat trials to date, there has been strong support from the community, with over 95 per cent of residents signing up to host traps or bait stations.

## Hōtaka: Te moana me ngā ara kawē riha

### Programme: Marine and pathways

Our islands and marine ecosystems and the native species that call these home are protected from invasion by new pest species via pathway management. This means interrupting the ways that pests can move around, such as rats stowing away on boats and getting to pest free islands, or marine pests hitching a ride on a dirty boat hull. Our pathway management work includes surveillance for new pests, responding to incursions of new pests and by educating and engaging the public to reduce the risk of pests being moved around, including surveillance, incursion response, education and engagement.

#### Pathways pest detection dog programme

Our dog handlers and their pest and pathogen detection dogs inspected 853 ferry sailings, up 13 per cent from last year. They look for signs and traces of pest animals such as rodents, Argentine ants, and plague skinks, and plant pathogens such as that which causes kauri dieback. The inspections consisted of 711 scheduled vehicle ferry sailings, 82 scheduled passenger ferry sailings, and 60 unscheduled charter sailings. They inspected 484 sailings to Waiheke, 226 to Aotea, and 64 to Rakino. They identified 125 risk goods on sailings and four items were intercepted. Dog handlers and their dogs also inspected 25 relocated houses before they were transported to the Hauraki Gulf islands.

The pathways pest detection dogs also recorded 12 pest indications on goods and vehicles destined for Hauraki Gulf islands. While most indications were related to residual pest animal scent, one specifically resulted in the prevention of a truck travelling to rodent-free Rakino Island when a rat was discovered in the engine bay by a rodent detection dog.

#### Caulerpa response – support for mana whenua ambassadors on Aotea / Great Barrier Island

Exotic Caulerpa, an invasive seaweed new to Aotearoa, was detected at Aotea in July 2021. Its presence in several bays triggered the establishment of a rāhui and restrictions on activities through a Controlled Area Notice to curb its spread. The seaweed poses a threat due to its ability to carpet the seafloor and exclude native species and can disperse easily through activities like boating and fishing. To raise awareness, Auckland Council funded mana whenua and marae ambassadors as part of a broader effort led by MPI. Their primary role was to educate both locals and visitors about how to reduce the risk of spreading this invasive species. Despite these efforts, exotic Caulerpa has been discovered at additional sites along the mainland coast. Biosecurity New Zealand is leading the national response to exotic Caulerpa and the council will support that response.



### Pest Free Warrants

The RPMP requires all commercial transport operators in the Hauraki Gulf to obtain and maintain a Pest Free Warrant by 2024. This is essential for keeping the Hauraki Gulf islands free from pests such as Argentine ants, rodents and kauri dieback. To date, 85 operators have attained their warrants and are actively applying effective biosecurity practices, with the fishing charter and hire boat sectors the latest to join the effort. During this year, 17 operators became pest free warranted, with another 21 operators in the process of obtaining warrants.

### Marine Biosecurity Hull Surveillance

We conduct regular hull inspections to check boats are meeting the requirements designed to reduce the spread of marine pests. Despite frequent unfavourable weather conditions, we surpassed our annual target, inspecting 1383 vessels instead of the anticipated 1150. These inspections, conducted via contract divers using pole cameras and remotely operated underwater vehicles, covered 917 marina berths and 466 moorings. This year, we had an overall compliance level of 62.6 per cent with allowable hull fouling. Vessels moored in marinas demonstrated stronger adherence to the rules, with a compliance rate of 75 per cent, compared to the 39 per cent seen among vessels on moorings. The most prevalent pest species found on vessels were the Mediterranean fanworm, clubbed tunicate and lightbulb ascidian. We follow up with non-compliant boat owners to ensure they bring their boats up to standard.

### Te Wharekura (Western Kiosk)

Te Wharekura involves repurposing the heritage B category kiosk on Quay Street into a cultural and environmental digital storytelling place through a co-design and co-delivery process with Ngāti Whātua Ōrākei. Interactive screens, audio and written media will encourage visitors to reflect critically on how they engage with, and are connected to, their local environment. Other iwi will be invited to participate in this kaupapa by Ngāti Whātua Ōrākei. Te Wharekura is a contemporary expression of ahikā for iwi (the deep relationship that mana whenua have with the land), and a place that provides both te ao Māori and western science perspectives to environmental education of the Hauraki Gulf / Tikapa Moana / Te Moananui ā Toi for Aucklanders and visitors alike.

### Boaties Summer Campaign

Our summer biosecurity awareness campaign, leveraging both digital and print media, succeeded in reaching over 507,000 individuals and generating 8800 page views on our Hauraki Gulf Summer Services campaign page. Post-campaign research revealed encouraging results: boat owners identified specific biosecurity actions, such as to ‘check/clean/close’ their gear, to prevent pests stowing away and being spread to the Hauraki Gulf islands.



### Case study: Post-storm island surveillance

The Tikapa Moana / Hauraki Gulf islands are a sanctuary for a wealth of native flora and fauna, including species that are nationally unique or endangered. Their survival and proliferation can be attributed to the significant investment in eradication programmes over the years. However, the threat of re-invasion by pests like rats, stoats, and possums remains a constant danger, particularly to vulnerable species such as kiwi and takahē.

Following storm events, floodwater and debris can inadvertently transport these invasive species onto the islands. The Auckland Anniversary weekend floods highlighted this risk, with live rats seen being carried out to sea from a North Shore stream.

We responded to this threat with robust surveillance, deploying pest detection dogs and their handlers to the islands to confirm pest presence or absence. This approach was supported by an array of detection tools including traps, bait stations, tracking tunnels, and thermal camera monitoring, facilitating early detection, control and removal of invasive species should they arrive.

These concerted efforts are crucial for maintaining the pest-free status of the Hauraki Gulf islands, underpinning the conservation of native biodiversity. The islands not only serve as critical habitats and breeding grounds for endangered species but also offer immense ecological, cultural, and recreational value. These conservation havens are pivotal for scientific research, education, ecotourism, and the enjoyment of both present and future generations.

## Hōtaka: Te hauropi ā-moana Programme: Marine ecology

While this year's weather proved challenging both for field work and for the seabirds we monitor, we continued to build our long-term data sets and spatial coverage. This was done through repeated monitoring in a number of locations and establishing monitoring of new populations and species in others. Research that adds a deeper understanding of seabird populations, biology and stressors also continued through multiple collaborations.

- We successfully monitored 16 seabird species.
- We continued with population monitoring of takahikare-moana (white-faced storm petrels) on Pokohinu / Burgess Island to compare data with Ruapuke / Maria Island (The Noises) and gather insights into the status of the whole population breeding in the Auckland region.
- We continued to monitor seabird breeding on Ōtata in The Noises island group looking at both natural nests and artificial nest boxes. New artificial nest boxes for kororā (little penguins) were installed with the aim of increasing the breeding population on this predator-free island.
- We continued with population monitoring and tracking the movements of kawau tikitiki (spotted shags), one of our most regionally threatened seabird species, over their winter breeding season at Tarahiki / Shag Island. These data will be used to help understand the key threats that are potentially responsible for their population crash. Our next step is to track them over summer to complete a full assessment of their annual movements.
- Ōi (grey-faced petrel) and animal pest monitoring continued in the Waitākere Ranges and on Moturemu Island in the Kaipara Harbour to understand how varying levels of pest animal presence affect mainland seabird population health. After this breeding season these data will be analysed and reported, including

management recommendations on the key levels important for securing mainland populations.

- Monitoring of seabirds, mainly tākoketai (black petrel) and tītī (Cook's petrel), began at the Glenfern Sanctuary on Aotea / Great Barrier Island. The project aims to understand the status of seabirds in the sanctuary but also to increase local knowledge and skills for future seabird work.
- We implemented and continued to monitor our highest priority seabird species and breeding locations, including:
  - breeding success monitoring on Te Hauturu-o-toi / Little Barrier Island for tāiko (black) and tītī (Cook's petrels)
  - surveying kāruhiruhi (pied shag), kawau paka (little shag), māpunga (black shag) and kawau tūi (little black shag) numbers at several key mainland colonies and sites in the Hauraki Gulf to understand the distribution of these species in the region. The shag programme was expanded to regional lakes where we located the first two colonies of kawau tūi (little black shag) ever recorded in the region
  - community monitoring of tākapu (Australasian gannets) at Muriwai to track population and breeding success and inform management of the area.
- We began analysis of feather samples from different seabird populations, investigating levels of mercury and other pollutant contamination to find out if these may affect health or breeding success.
- We completed the mapping of seafloor features of Tāmaki Strait (351km<sup>2</sup>), Kawau Bay (188km<sup>2</sup>) and an area of the central Hauraki Gulf (1260km<sup>2</sup>). These data will help identify areas of importance for marine habitats and inform future marine Significant Ecological Area identification.

### Case Study: Population monitoring of takahikare-moana (white-faced storm petrels) on Ruapuke / Maria Island

Takahikare-moana is a sub-species endemic to New Zealand with two confirmed breeding populations on Pokohinu / Burgess Island (Mokohinau) and Ruapuke / Maria Island (The Noises). The species' national threat status is classified as 'At Risk-Relict' meaning there is a small population that has stabilised after declining. However, we lack information regarding population size, trends, and dynamics, particularly for the Ruapuke colony.

With three years of monitoring and data collection, we obtained the first ever population size estimate for Ruapuke. Our data showed that over 7000 birds have made Ruapuke their home. However, the population appears unstable with big fluctuations between years in nest occupancy and breeding success. The population has been highly vulnerable to weather events such as the storms of early 2023. Cyclone Hale and the Auckland floods in January struck right after the egg hatching period, when the chicks are most vulnerable, and only one quarter of chicks were still alive before the arrival of Cyclone Gabrielle in February.

These findings highlight the fundamental ecological role that this tiny island, only 1ha in size, plays within the gulf, its vulnerability, and the importance of creating and maintaining a healthy environment both on land and at sea to keep this population safe and thriving.



## Hōtaka: Te whakawhānui i ngā kaupapa mahi a te hapori

### Programme: Expanding community action

Community-led conservation action has seen a resurgence following various restrictions and impacts caused by COVID-19 and adverse weather events. The resilience of conservation groups has been impressive with many continuing to grow their activities across Tāmaki Makaurau. The NETR-funded Expanding Community Action programme provides a range of support and services to groups with the suite of offerings continuing to evolve to meet the different and emerging needs of our conservation community.

- The **Community Coordination and Facilitation** (CCF) grant has continued to support and enable the amplification of community-led conservation, including group planning and organisational support alongside the embedding of coordinators and facilitators in the community. Now in its fifth year and delivered in partnership with Healthy Waters, the grant invested \$1.43 million (comprising \$625,003 from NETR and \$417,996 from Healthy Waters) across 35 projects. The grant has proven to be invaluable in enabling the widespread growth in community-led conservation with increasing volunteer numbers and effectiveness.
- The **Trees for Survival** programme is a long-standing partnership with the Trees for Survival Trust, Healthy Waters and sponsors. The programme supports school students to get actively involved in conservation through growing and planting native trees and learning about the importance of restoration and protecting stream health. It started the year with 97 schools and has since welcomed nine more. With the support of 3650 volunteers (including students, teachers, parents, sponsors and community helpers) at 109 planting days, over 89,300 native plants were planted along 4.5km of stream restoring 8.9ha of riparian edges.
- Providing practical **tools and resources** continues to be an essential mechanism for enabling community-led conservation activities across Tāmaki Makaurau. The

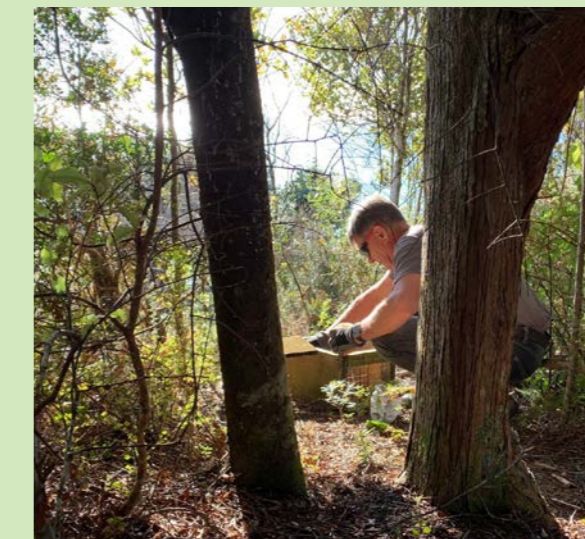
council provided 381 community conservation groups, iwi, schools and individuals with \$434,000 of supplies for pest animal and weed control, restoration planting, monitoring and other equipment.

- Protecting **sites of biodiversity significance** across Tāmaki Makaurau is a high priority. The council complements work on public land by engaging with private landowners, providing them with advice and funding to take action to protect and enhance high priority biodiversity sites on their land. Nine landowner-led projects were granted \$244,792 enabling a range of conservation activities. These included 9.4km of stock-exclusion fencing, 340ha of weed and/or pest animal control, and planting of 3922 native plants restoring 2.85ha of land. Several initiatives involve multiple landowners, such as protecting the Maungawhau rock forest which engages 90 landowners to protect these critically endangered forest fragments.
- The **Te Aho Tū Roa and Enviroschools** programmes, in partnership with the Toimata Foundation, focus on engaging young people across Tāmaki Makaurau in environmental action and building connections. The programme works with kōhanga/puna reo, kura, wharekura and communities that embrace te ao Māori, te reo Māori, and mātauranga. This year, it supported:
  - 13 Māori Medium Schools, 24 environmental partnerships, 27 events, workshops and projects, and 1189 participants in the kaupapa. Activities included kūmara workshops, redesigning mahinga kai to better support composting, food gardens, composting, native tree planting, pest animal management and monitoring.
  - The Enviroschools kaupapa has 226 schools and 89 Early Childhood Centres (ECE) engaged in creating a healthy, peaceful, sustainable world through

learning and taking action together. Enviroschools engaged in 42 events and clusters around the natural environment attended by 2272 people. Activities included professional development days, school clusters, workshops around water quality assessment tools, plantings, and resource development. Support for ECE engaged 135 kindergarten staff, students and whanau in conservation workshops. Activities included completing biodiversity assessment and improvement plans, community hui, moth plant pod and seedling collection, and native plantings.

- The **'Save Our Backyard Birdsong'** campaign uses social media, radio, and council channels to influence Aucklanders to take action for conservation. The Spring 2022 and Autumn 2023 campaigns attracted 17,876 views to the Our Auckland campaign page and 84,968 views of our YouTube ads. Over 258,600 people engaged with our campaigns in some way. Evaluation surveys reflect this impact with the number of Aucklanders who know how to contribute to conservation increasing from 57 per cent to 87 per cent. The campaigns inspire residents to minimise introduced pests and cultivate native plant species in their backyards, fostering a collective effort to restore the beloved birdsong of Tāmaki Makaurau. Community leaders and council staff starred in videos that were instrumental in connecting with audiences and amplifying our messaging.

### Case study: Pest Free Leigh



Pest Free Leigh has made significant strides in their conservation efforts in just three years, thanks to support from the Community Coordination and Facilitation Grant (CCF). Despite being established amid the uncertainty of the early COVID-19 lockdowns in 2020, Pest Free Leigh seamlessly found its place within the existing conservation landscape of Rodney East, and has been growing their trap network, developing their strategic plan and embedding themselves in the community.

Pest Free Leigh now has over 170 members and manages more than 360 pest control devices, recording 3416 catches in 2022. They've forged

strong community ties, including a key relationship with Omaha Marae (Ngāti Manuhiri), establishing a trapline on their land that iwi members maintain.

Their vision is 'to protect our existing birdlife and make Leigh a landing point for other endangered birds spreading from Te Hauturu-o-Toi / Little Barrier Island to the mainland by eliminating possums, rats and mustelids'. Acting as a connector, they've brought together existing initiatives like the Leigh Harbour Valley Society and Leigh Penguin Project and coordinated with Restore Rodney East and The Forest Bridge Trust to build landscape-scale momentum.

Reflecting on their journey, Pest Free Leigh acknowledges the CCF grant as a cornerstone of their growth and development. Funds from the latest CCF round enabled strategic planning for the coming years. Previous funding rounds have been cited as 'instrumental in successfully establishing a predator trapping project in Leigh's residential areas and expanded trapping into the wider rural landscape'.

From their challenging start in 2020 to their established role in the conservation landscape today, Pest Free Leigh stands as a testament to how strategic funding support can empower community-led groups to drive meaningful environmental change.



Digital tools to capture, display and share conservation data and information

# Hōtaka: Ngā āhuatanga e āhei ai te mahi Programme: Enabling tools

Enabling Tools focused on administering, improving and promoting our core existing digital conservation tools – Ruru, NESE and Tiaki Tāmaki Makaurau. The programme is continually scanning and evaluating digital innovation opportunities to support biodiversity conservation.

### Leading the way in conservation data management

- Ruru, our Conservation Management System, continues to innovate and set standards for conservation data management in Aotearoa. Reporting on NETR funded conservation programmes, Ruru allows Environmental Services and co-delivery partners to remain responsive and adaptive to site specific conservation needs. We initiated new work programmes this year and we continued promoting user uptake and building capability across Auckland Council. A field support role was created to train and support staff and contractors, ensuring we have consistent and accurate data entry. We also focused on sharing data publicly through open data portals, Geomaps and the Tiaki Tāmaki Makaurau map. Improved connectivity with external platforms such as TrapNZ and iNaturalist means this data can be viewed, analysed, and included in reporting metrics for the region, allowing for better informed decision-making.

### Bridging council and community

- Natural Environment Stakeholder Engagement (NESE), our customer relationship management system, allows council staff to have more complete oversight of conversations and actions between the council and the conservation community. We improved internal staff use of NESE through focused training sessions, and explored how NESE data can be better visualised to report on community conservation efforts and help inform regional conservation priorities.

### Online conservation portal for Aucklanders

- The [Tiaki Tāmaki Makaurau | Conservation Auckland](#) website audience grows year on year. This year, 120,000 Aucklanders visited the conservation portal for current best practice conservation information and data. Pest [search](#) is still a significant drawcard and the interactive Tiaki conservation [map](#) is hugely popular for those wanting spatial conservation information for planning purposes. Our current priority is realising mana whenua aspirations for the Tiaki Tāmaki Makaurau with some significant enhancement and exciting new content expected over this coming year.

## Case study: Environmental services drone programme

We are introducing drone technology to support environmental management via remote image and video survey. Accessibility and affordability of off-the-shelf hardware and software makes this technology, including methods of data processing and analysis, very accessible. Environmental Services is working towards Civil Aviation Authority certification to enable the department to efficiently deliver this technology to a high standard, to support ecological survey, surveillance and monitoring. Over the past year, the programme has supported ecological survey and monitoring on regional and local parkland, maunga and Department of Conservation land. Work has included ecosystem and species mapping and the monitoring of native plantings, vegetation plots, and priority biodiversity sites such as at Whatipū Scientific Reserve in the Waitākere Ranges Regional Park.

Drones offer significant advantages. They allow for the survey of large and complex areas that are usually challenging to assess and navigate, making them an ideal survey tool. They provide easy navigation through challenging areas, and their use increases efficiency, allowing for more ground to be covered in less time. There are huge health and safety benefits from being able to quickly assess a site with a drone without physically entering it: Cyclone Gabrielle clearly demonstrated the value of this, with Environmental Service drone pilots supporting Auckland Emergency Management and other storm recovery teams to collect digital surface information for large areas of Muriwai. The ability to be on site quickly, collect and process the data, and provide a site visualisation within 48 hours to inform a response was invaluable to Auckland Emergency Management teams and the affected community.

“ Healthy Waters have had a very challenging start to the calendar year with the devastating rain events affecting all of Auckland, but our WQTR projects have continued, with a major planning milestone achieved with the decision to extend the Central Interceptor Tunnel from Grey Lynn to Pt Erin Park.

This will facilitate a very cost-effective outcome and minimise the disruption to the St Marys Bay and Herne Bay communities. Stormwater separation in St Marys Bay and Herne Bay will now proceed on a staged basis as growth opportunities present themselves.

Further work on our separation projects this year included construction beginning in Pt Chevalier and Waterview, with detailed design underway for further separation projects in Oakley, Blockhouse Bay and lower Khyber Pass Road.

The Regional Waterway Protection Fund for rural landowners granted 42 property owners to a value of \$700,000. This will fund installation of 16.5km fencing and 160,000 native plants that help protect waterways from stock and reduce contaminants and erosion.

And our Safe Networks teams tested 130 stormwater outlets across 25 beaches and commenced a further 14 network investigations and over 8,000 private drainage inspections with over 155 private issues resolved this year; great progress made to improve our water quality!

**Craig Mcilroy**  
General Manager Healthy Waters

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## Wāhanga Tuatoru: Reiti koununga wai kua āta whakaritea **Section 2: Water quality targeted rate**

The water quality targeted rate (WQTR) provides increased investment over 13 years for projects that will result in cleaner harbours, beaches, and streams. Our key priorities are to reduce public health risks from wastewater and to improve the health of our waterways. These outcomes are being achieved through seven key work programmes.

- **Western Isthmus Water Quality Improvement Programme:** To upgrade stormwater and wastewater networks to reduce wet weather overflows and improve the water quality of the Western Isthmus waterways and Waitemātā Harbour.
- **Safe Networks:** To investigate and mitigate sources of wastewater contamination entering our popular swimming beaches and waterways.
- **Safe Septic:** To introduce a proactive regional compliance monitoring for private onsite wastewater systems such as septic tanks.
- **Urban and Rural Stream Rehabilitation:** To improve the ecological health of streams.
- **Contaminant Reduction:** To reduce the amount of litter, sediment and road pollutants entering our waterways.

Over time, WQTR programmes will also reduce Safeswim non-compliance public health warnings at recreational beaches across urban Auckland. Watercare water and wastewater charges have also contributed to the programme which will help speed up delivery of these water quality improvement projects.

- **Eastern Isthmus Water Quality Improvement:** To upgrade and build stormwater and wastewater networks to reduce wet weather overflows and improve the water quality of the Eastern Isthmus waterways and Waitemātā Harbour.
- **Southern Catchment Alignment:** To improve water quality in the Manukau Harbour by aligning the timing of stormwater improvements with major infrastructure projects by Auckland Transport, Waka Kotahi NZ Transport Agency and Kāinga Ora.

Water quality across Auckland has been affected by storm events through 2023, most significantly by wastewater overflows caused by flooding and debris being washed into waterways. The work delivered by the WQTR programmes so far has given us the tools and knowledge to support this recovery for stream rehabilitation and will be an ongoing focus in future work programmes.



Building major infrastructure to reduce public health risk

## Hōtaka: Ngā pikinga kounga wai i te kūitinga ki te uru

### Programme: Western isthmus water quality improvement

This \$680 million key programme is jointly funded by the targeted rate and Watercare. It fast-tracks major infrastructure upgrades to significantly reduce wastewater overflows into the Waitematā Harbour and reduce stormwater entering the wastewater network. The project will stop wet weather wastewater overflows during most normal rainfall events and make all beaches from Pt Chevalier to St Marys Bay swimmable under most conditions. The work also contributes

to the council's objectives of improving the health of receiving environments, and the Safeswim and Safe Networks programme goals to reduce public health risk. The programme is being led by Watercare and Auckland Council's Healthy Waters team. Watercare's investment supports their annual targets for fewer wastewater overflows, as well as lower volumes, and complements their Central Interceptor programme – a 13km pipeline costing \$1.2 billion, expected to be complete in 2031.

### Case study: Western Isthmus Water Quality Improvement

Work planned for the St Marys Bay, Herne Bay and Pt Erin catchments has been redesigned to deliver better cost efficiency and water quality improvement in wet weather. Consenting is underway to extend the Central Interceptor from Grey Lynn to Pt Erin Park which will involve an additional 1.4km on the already designed 14km tunnel. This will enable more connections to the new network and reduce human wastewater contamination risks for Herne Bay, St Mary's Bay and northern beaches.

This programme provides for housing development in the area and allows for catchment separation over the longer term to further improve network performance. Work this year progressed design feasibility with a focus concept design and resource consent for the remaining physical works in the next financial year.



## Investigating contamination at swimming and recreation spots

# Hōtaka: Ngā kōtuinga āhuru Programme: Safe Networks

This programme investigates and fixes drainage network issues that contribute to poor water quality and pose a risk to public health at our beaches and waterways. Where contaminants are found, indicating the presence of wastewater, our teams investigate, track and monitor discharges to their point of origin through water quality sampling, CCTV, and smoke and dye testing. Once the source is identified, we either mitigate the discharge or develop solutions if the problem is more complex.

This year, our teams tested 130 stormwater outlets across 25 beaches and began a further 14 network investigations. We inspected private property drainage at over 8000 properties. Private drainage issues were referred to Auckland Council's Compliance team to work with property owners, with approximately 155 private issues resolved this year. Where we find public network drainage issues, Watercare and Healthy Waters will programme maintenance and renewals, or plan projects as needed.

### Case study: Safe Networks in the Eastern Bays

As part of the Safe Networks programme, we investigated public and private drainage in St Heliers, Kohimarama and Mission Bay to identify any drainage problems that could be contributing to poor water quality at the Eastern Bays beaches. This includes illegal connections to either the wastewater or stormwater network allowing too much water or sewage into the network. Our specialist field team inspected private drainage on more than 7500 properties and identified 400 drainage issues. It is encouraging to see property owners are acting promptly and fixing their issues to improve water quality.



## Compliance of onsite wastewater systems to reduce health risk

# Hōtaka: Ngā pūnaha haumaruru mō te parakaingaki Programme: Safe Septic

Regular maintenance of the region's 45,000 private onsite wastewater systems is essential for reducing faecal contaminants entering our waterways and beaches. The council is implementing a region-wide compliance system requiring property owners with onsite wastewater systems to provide regular maintenance records showing their systems are in good working condition. Since late 2019, we have received more than 20,000 maintenance records for such systems using council's online inspection form. We will continue to monitor changes in water quality across

the region and work with property owners to help them look after their onsite wastewater systems. A database of all onsite wastewater systems has enabled staff to actively monitor systems and start contacting property owners to request and process maintenance records. This helps compliance staff to monitor problems and prioritise responses. Our communication to property owners also highlights the importance regular maintenance for preventing harm to the environment and support them in resolving any post-flood issues.

## Case study: Regionwide compliance

This programme began in 2018, focussing on catchments with poor water quality, however there are waterways all over the region that show contamination from septic systems. In 2022, the focus shifted from catchments to region-wide compliance. New digital processes enabled the council to contact property owners to request their most recent maintenance records for their onsite wastewater system. Compliance staff then worked with the property

owner to ensure any problems were repaired. This resulted in over 3000 systems becoming compliant between 1 July 2022 and 30 June 2023. Compliance staff are also able to follow-up on over 500 systems that aren't working well, and over 2000 systems that are overdue for their regular maintenance. The Safe Septic programme has enabled property owners to better understand their onsite wastewater systems and the effect they can have on the environment.



## Improving the ecological health of waterways

# Hōtaka: Te whakaoranga o ngā awa ā-tāone, ā-taiwhenua hoki

## Programme: Urban and rural stream rehabilitation

This programme's key objective is to improve the ecological health of our streams and rivers. This involves managing streambank erosion, as well as working with the community to replant and revive our streams. We use different mechanisms to fund this, ranging from directly managing physical works improvements to grants and co-funding agreements that enable landowners to deliver outcomes

that benefit all of Auckland. Connections with community groups and better understanding of vulnerable streams across Auckland built through this programme have supported our immediate flood response after the Auckland Anniversary floods and Cyclone Gabrielle and planning for future stream rehabilitation through flood recovery works.

### Case study: Regional Waterway Protection Fund

This fund offers co-funding for waterway protection fencing and planting of private rural land across Franklin, Papakura, Aotea / Great Barrier Island, and Rodney. We funded 48 of 64 applications worth approximately \$700,000 in the past year. Landowners are given two years to complete the work. The 2022/2023 round of funding will deliver 16.5km of fencing, protect 47.5ha of riparian areas, 33km of waterways and 12.5ha of wetlands, and plant approximately 160,000 plants in newly protected areas. Auditing of landowner projects

has shown a very good level of project delivery. Keeping stock out of waterways by fencing quickly improves water quality, and planting riparian margins and wetlands is transforming these areas. Riparian restoration work with iwi and community groups has created or improved habitats for native species, including inanga spawning sites, supporting environmental wellbeing and cultural heritage. The fund is currently supporting the restoration of an inanga spawning site and education programme run by a landowner in on the Āwhitu Peninsula.



## Hōtaka: Te whakaiti tukunga tāoke

### Programme: Contaminant reduction

#### Urban contaminants

Urban areas contribute contaminants from transport, industrial use, litter, and construction to our waterways. Stormwater networks in older parts of Tāmaki Makaurau were previously mostly designed to move rather than treat water. Our targeted retrofit programme identifies opportunities to improve water quality treatment in our existing stormwater networks. It specifically targets maximising gains in water quality through the following.

- Creating Water Quality Improvement Plans for Te Auaunga / Oakley Creek, Puhinui Stream, Māngere, Onehunga and One Tree Hill respond to development in these areas, considering the opportunities for water quality improvement for the broader catchment.
- Designing ways to treat contaminants from industrial and commercial land uses in Wairau, Henderson, Avondale and Warkworth.
- Encouraging water quality treatment for pipe renewal and network extension projects, such as installing gross pollutant traps (see case study) leveraged off an upgrade of the stormwater network driven by redevelopment of the Tāmaki regeneration programme in Glen Innes.

- Reducing contamination from industrial and trade activity. Through the Industrial and Trade Activity Proactive Programme pilot, staff visited 60 sites in Wiri to discuss actions business can take to reduce water quality impact, and wider water quality and environmental improvements happening in the catchment.

#### Rural contaminants

Auckland Council's support of the Kaipara Moana Remediation (KMR) programme enables coordinated planning and problem solving to deliver large-scale projects that restore the health and mauri of the Kaipara Moana by reducing sediment contamination. The programme had 291 Kaipara landowners commit to new plans and/or additional grant funded works in the past year, enabling a total of 550km of fencing and 1.1 million plants. To date, 571 landowners in total have now committed to plans or have plans currently being developed. Following the 2023 storms, the KMR group has been actively promoting actions for remediating land affected by landslips, supporting recovery of the land and biodiversity, and reducing ongoing sediment contamination into waterways.

Litter and debris entering the environment through stormwater, littering and illegal dumping are ongoing problems in coastal marine and estuarine environments. Access to coastal and inland waterway areas is often problematic and raises health and safety concerns for community and contractors alike. Sea Cleaners Trust, which began operation in 2002, has the specialised equipment needed to access many of these areas. From cans and bottles to tyres and marine buoys, they have removed enough litter over this time to fill over 468 shipping containers. The council has been providing funding to Sea Cleaners Trust since 2021 to continue operations and in 2023 they removed close to 1.5 million litres of rubbish from Auckland's harbours and waterways. Through partnerships with recycling facilities and Auckland Council transfer stations, Sea Cleaners minimises the amount of litter that is sent to landfill.

### Case study: Glen Innes Water Quality Improvements

Areas that are growing quickly, have a lot of traffic, and also have commercial land uses tend to produce a lot of contaminants that can harm our streams and coasts. One example of this is the Glen Innes town centre which is rapidly growing to support new residential and commercial development. This project piloted installation of five devices to improve stormwater quality in response to that growth. The devices were selected specifically to treat the water quality issues identified at Omaru Creek, including elevated copper and zinc concentrations from the commercial and light industry around the town centre. They treat gross pollutants (particles larger than 5mm) and other large contaminants before they enter Omaru Creek and the Tāmaki Estuary. The lessons from this project have informed design for similar installations in other high-growth areas to reduce urban contamination.



**Building major infrastructure to reduce public health risk**

Hōtaka: Te whakakounga ake o te wai i te kūititanga o te rāwhiti

## **Programme: Eastern isthmus water quality improvement**

Following the progress made in the western isthmus programme, the council has invested \$174 million in this programme within the current 10-year budget. The eastern isthmus has significant water quality issues affecting coastal environments from the central city to the Tāmaki Estuary. Like the western isthmus programme, investment in stormwater infrastructure is necessary to complement Watercare's investment in the wastewater network to reduce overflows and pollution. This involves building stormwater infrastructure to enable sewer separation and stormwater treatment.

Watercare is progressing its plans for the Newmarket Gully Tunnels, including planning and feasibility of alignment, appointing design partners, and organising site investigation work. Important private drainage separation inspection work has been completed in Newmarket, including properties on Brighton Road, Ayr Street, Cowie Street, Huntly Avenue, Parkfield Terrace, Market Road, Patey Street, Laxon Terrace and Sarawia Streets. This separation investigation work will help to develop wet weather overflow solutions.

### **Case study: Lower Khyber Pass stormwater upgrade**

In wet weather, there are combined sewer and stormwater overflows into the Newmarket Stream from an overflow point at Kingdon Street. This affects water quality in both the stream and Hobson Bay. To resolve this, we are designing separate and extended stormwater networks in the lower Khyber Pass Road area where we have identified illegal stormwater connections. The project includes extension and renewal of the existing stormwater network (approximately 510m) in Khyber Pass Road and Kingdon Street and connection of these networks to the existing 20m deep stormwater tunnel in Kingdon Street. The project will enable future separation of the University of Auckland site in Khyber Pass Road.



## Hōtaka: Te whakahāngaitanga o ngā riu hopuwai o te tonga

### Programme: Southern catchments alignment

This new programme was introduced in the council's 10-year Budget 2021-2031 to improve water quality in the Manukau Harbour by aligning the timing of stormwater improvements with other major infrastructure projects. Significant work is expected to begin from 2026. This past year we focussed on identifying opportunities for projects where we could implement water quality improvements alongside scheduled infrastructure improvements to minimise disruptions, maximise efficiencies and achieve better water quality outcomes.

Roads and urban development are key contributors to water quality issues in the Manukau Harbour. With major transportation projects planned in the next decade through southern and eastern Auckland including the South-western Gateway Transport Programme, there are several opportunities to improve water quality in the Manukau Harbour, reduce stormwater pollutants, and enhance the habitat and biodiversity of the waterways.





## Summary

The natural environment and water quality targeted rates are significant investments that drive the material results of Auckland Council's strategies and plans, with the aim of enhancing and protecting the natural environment and improving water quality. With the continued impact of environmental pressures such as kauri dieback and pest animals, and the devastating summer flooding events, the funding also reinforces the role of culture and community, and our collective responsibility as kaitiaki of Tāmaki Makaurau. Through partnership with mana whenua and the support of community-led stewardship, the results of the targeted rates in 2022/2023 saw programmes delivered across the mainland, islands, awa, coastal and marine environments. The following highlights acknowledge the mahi and diverse delivery of programmes across the rohe.

- A baseline survey was initiated for kauri dieback across the Hunua Ranges in partnership with several iwi mana whenua o Te Ngāherehere o Kohukohunui with the hope of establishing the area as the largest disease-free kauri forest in the country.
- Continued pest control in the Hunua ranges covered 21,500ha, the ongoing success of which is supporting the health of 259 pairs of kōkako, and the designation of a 'genetically robust' population.
- Te Korowai o Waiheke eliminated over 9200 pests across 9200ha, using 1650 traps.
- Pest and pathogen detection dogs inspected 853 ferry sailings, looking for signs of pest animals such as rodents, Argentine ants, and plague skinks, and plant pathogens such as that which causes kauri dieback.

- The Regional Parks team and contractors delivered 2579ha of weed control allowing them to maintain 6565ha or around half of high biodiversity value ecosystems on regional parkland at levels where native species can thrive.
- A consent is underway to extend the Central Interceptor from Grey Lynn to Pt Erin Park which will involve an additional 1.4km on the already designed 14km tunnel. This will mean that the Western Isthmus Water Quality Improvement project will provide more connections to the new network and reduce human wastewater contamination risks for Herne Bay, St Marys Bay and northern beaches.
- The Safe Networks team tested 130 stormwater outlets across 25 beaches and began a further 14 network investigations. This included inspection of private property drainage at over 8000 properties, which with the support of compliance led to approximately 155 private issues resolved this year.
- Over 3000 onsite wastewater systems became compliant between this year.
- The Kaipara Moana Remediation (KMR) programme enables coordinated planning and problem solving to restore the health and mauri of the Kaipara Moana by reducing sediment contamination. The programme had 291 Kaipara landowners commit to new plans and/or additional grant funded works in the past year, enabling a total of 550km of fencing and 1.1 million plants.

Next year, we'll continue to work with mana whenua and our communities to keep up the momentum on these programmes and ensure that we continue to deliver great environmental and water quality outcomes for Tāmaki Makaurau.



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Natural environment and water quality targeted rates – Highlights 2022/2023

Te Komiti mō te Whakarite Mahere, te Taiao, me ngā Papa Rēhia  
Planning, Environment and Parks Committee

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