



# BIODIVERSITY ACTIVITY

## 1. Overview

- 1.1.1 The purpose of this report is to update Council on the Annual Report of programmes giving effect to the 2018-19 Biodiversity Operational Plan. The report is presented in four sections: Priority site protection, Biodiversity partnerships, Tōtara Reserve Regional Park management; and Collaboration projects with the **Department of Conservation** (DOC).
- 1.1.2 Over the 2018-19 year all four annual plan targets were met. The priority sites programme met the targets for four new wetlands managed and exceeded the target of 7 new bush remnants added to the programme with a total of 16 new bush remnants added during the year. The priority sites programme continued the implementation of the biodiversity review completing 127 rapid ecological assessments at sites (more than the 70 that were originally planned) and also introducing a new reporting framework for sites to provide more transparency around levels of management at priority sites. The prioritisation of sites within the region was also refreshed. The community biodiversity programme completed 32 projects well exceeding the target of 12. Work at Totara Reserve was dominated by work to recover from the flooding event in 2018.

Table 1 Progress reporting for the Biodiversity Activity Long-term Plan targets for 2018-19.

Long-term Plan Target	Target	Allocated	Completed	Result
<b>Protect/enhance priority habitat remnants</b>				
Additional top 100 wetlands managed	4	4	4	100%
Additional top 200 bush remnants managed	7	n/a	16	228%
<b>Support community involvement in biodiversity protection</b>				
Support existing community-based biodiversity improvement projects	12	34	32	267%
<b>Tōtara Reserve Regional Park</b>				
Annual report on the management of Tōtara Reserve Regional Park for biodiversity and recreational values, including managing the camping facility.	1	1	1	100%

## 2 Priority Sites Programme

### Annual Summary

- 2.1.1 This programme was initiated to deliver on a One Plan method to have 100 of the Region's priority wetlands and 200 of its best bush remnants under active management by 2028-29.
- 2.1.2 At the start of the 2018- 19 year, the programme reported 65 priority wetlands and 131 priority bush remnants to be under active management. The annual plan targets were to add four wetlands and 7 bush remnants to the programme. Four new wetlands and 16 new bush remnants were added to the programme during the year meeting (and exceeding) the annual plan targets (Table 2)

Table 2 Results for the priority sites programme Long-term Plan targets for 2018-19.

Long-term Plan Target	Target	Allocated	Completed	Result
<b>Protect/enhance priority habitat remnants</b>				
Additional top 100 wetlands actively managed	4	n/a	4	100%
Additional top 200 bush remnants actively managed	7	n/a	16	228% <sup>1</sup>

- 2.1.3 The priority sites programme was reviewed in 2017-18 and the Operational Plan for 2018-19 introduced some changes to the way sites are assessed and managed. Much of the 2018-19 year was dedicated to work to implement that system. The changes included the introduction of a new classification of the level of management that sites are receiving. This adds more detail to the previous reporting on sites about whether or not they are being actively managed. The management level rating (see Box 1) incorporates assessments of the level of knowledge of the biodiversity at a site through a **Rapid Ecological Assessment** (REA) and whether Horizons has completed some restoration work at the site, which was previously the mechanism the programme used to indicate whether a site was actively managed. The programme review also introduced the requirement for site management plans, and these, along with frequency of visits, will become key factors for achieving management level 3. The level of priority works in the site management plan that are being implemented are also part of the management level index with level 4 indicating all priority works are being completed. Levels 5 and 6 reflect sites receiving a greater level of management. Reporting will now cover only the new management level index for sites that have been worked on and the original prioritisation category (e.g., A, B, C, D) will no longer be reported on. Please note the management level index framework is continuing to be refined as we gain more experience with its implementation.
- 2.1.4 During the 2018-19 year the sites within the programme were reviewed and assigned within the management level framework. To assist with this sites that had previously received support from Horizons, however had not had an ecological assessment, were prioritised for rapid ecological

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<sup>1</sup> The number here includes bush remnants that audit information showed meet the criteria for management level 2

assessments. Seventy REA's were planned for 2018-19 and over the year 127 REA's were completed (122 bush remnants and 5 wetlands).

2.1.5 The number of bush remnants and wetlands in each management level as at 30 June 2019 is reported in Table 3. Overall 13 sites are above management level 4 or above, 49 sites are at management level 3 and 151 sites are at management level 2.

2.1.6 As shown in Table 4, at the end of the 2017-18 financial year 196 sites were considered actively managed. At the end of the 2018-19 financial year 213 sites are management level 2 or above. This is an increase of 17 sites, which is less than the 20 new sites added to the programme in the year. The difference is three wetland sites that were removed from the programme following the audit of information showing these sites that were added to the programme historically do not meet the criteria for management level 2. Similarly the nine "extra" bush remnants are a result of audit information showing these sites meet the criteria for management level 2.

Table 3 Management Level Index ratings for priority sites as at June 30, 2019.

Management Level	Bush sites	Wetland sites	All sites
6	1	0	1
5	1	2	3
4	7	2	9
3	37	12	49
2	101	50	151
<b>Sub-total for Level 2+</b>	<b>147</b>	<b>66</b>	<b>213</b>
1	249	61	310
0.5	382	168	550
<b>Total</b>	<b>778</b>	<b>295</b>	<b>1073</b>

Table 4 Status of Priority Sites within the programme over the 2017-18 and 2018-19 years as at June 30, 2019.

Priority Site	2017-18 Actively Managed	2018-19 Level 2+	2018-19 Level 3+
Wetland	65	66	16
Bush Remnant	131	147	46
<b>Priority Indigenous Biodiversity Sites (PIBS)</b>	<b>196</b>	<b>213</b>	<b>62</b>

## Activity summary for the reporting period

2.1.7 During April to June the Biodiversity team completed a further 36 REAs, taking the total for this year to 127 REAs (122 bush remnants and 5 wetlands).

2.1.8 Four new high priority wetland sites were added to the managed list. They were McDowall's Wetland, Sarah Pond, Lake Heaton and Lake Bernard. This met the annual plan target of four new wetland sites.

2.1.9 No new high priority bush remnants were added to the managed list during this period. This year, 16 new bush remnants were added, exceeding the annual plan target of seven new bush remnant sites.

### **Box 1: Management Level Descriptions**

To achieve consistency in reporting over the coming 18 months the site list has been reconciled and the number of sites at each management level will be reported. Draft management levels have been outlined below.

**Management Level Zero:** Sites that we know exist but have not visited yet, which will not be reported.

**Management Level 0.5:** A holding level for sites that have received a contribution toward management from HRC but have not yet received an REA. Many of these sites exist in the Whanganui and Ruapehu districts. The biodiversity team is planning to visit these sites and complete REA's moving these sites to a level two. In future this level will be reserved for sites with an REA greater than 10 years old.

**Management Level 1:** Sites at management level 1 will have been assessed using the REA process. Sites, including the GIS layer, will be included in our inventory. This management level is valid for 10 years, when a new REA must be completed or the site returns to level 0.5. Sites (and GIS layer) that were a level 1 and are returned to a level 0.5 will still exist in our inventory, but the level reflects the dated, and possibly now incorrect, data that we have on that site.

**Management Level 2:** Sites at management level 2 will fulfil the requirements of level 1 and have had a previous contribution to their management by Horizons. This contribution may have been a 'one-off', such as fencing or other management contribution. This would include sites that were previously managed but where support has been withdrawn for any reason. These sites will have brief site summaries which detail why management is not continuing but for historical sites this will only be possible where this information is available.

**Management Level 3:** Sites at management level 3 will fulfil the requirements of level 1 and have site visits to assess works required at least biannually. These sites will have a site summary and management plan. Identified works required will be prioritised. Some work may be deferred if appropriate. Landowners will be supported and encouraged to contribute to the management of these sites.

**Management Level 4:** Sites at management level 4 will fulfil the requirements of level 3 and have all high priority works carried out as required. Landowners will be supported and encouraged to contribute to the management of these sites. Tōtara Reserve is an example of a site at this management level.

**Management Level 5:** Sites at management level 5 will fulfil the requirements of level 4 management and have true management partnerships established. Alternatively, they may be managed by the landowner, iwi or community group with only surveillance and advice from Horizons. Manawatū Gorge and Cape Turnagain are examples of sites at this management level.

**Management Level 6:** Sites at management level 6 will meet at least management level 4 and be receiving control for all animal pests. Bushy Park is the only site that meets the criteria for this level.

### 3 Biodiversity Partnerships

3.1.1 The Biodiversity Partnerships activity encompasses work completed in collaboration with others to deliver biodiversity and recreational benefits to the Region via projects such as the Manawatū Gorge and Pukaha Mount Bruce, and projects to support community-led initiatives such as the **Rangitikei Environment Group's** (REG) efforts to control old man's beard. The 34 projects approved in 2018-19 included seven Biodiversity Collaborations, 13 Community Biodiversity projects and 14 Community Grant projects. Overall 32 of the 34 allocated projects were completed exceeding the target by 167%. Further detail on the projects is provided in the sections below. The two projects that were not completed were the Tawata Mainland island project where there has been some changes within the organisation Horizons partners with on this project and the Ohau Beach walkway where stakeholder support did not eventuate.

Table 5 Progress reporting for the Biosecurity Partnerships programmes Long-term Plan targets.

	Target	Allocated	Completed	Result
<b>Support community involvement in biodiversity protection</b>				
Support existing community-based biodiversity improvement projects* <sup>4</sup>	12	34	32	267%

#### Biodiversity Collaborations

3.1.2 Overall, six of the seven Biodiversity Collaborations were completed and are summarised in the table below. Highlights are the successes gained through collaborations such Te Āpiti Manawatū Gorge where significant Old Man's Beard weed control occurred. The Tawata Mainland Island project did not go ahead due to changes within the external organisation that Horizons partners with.

Table 6 Progress against Biodiversity Collaborations.

	Project	Comment	Status	Result
1	Rangitikei Environment Group (REG)	Weed control complete for this season.	Complete	100%
2	Kia Wharite	See Section 5 Collaboration Projects.	Complete	100%
3	Weedbusters Palmerston North	Weed control completed.	Complete	100%
4	Tawata Mainland Island	No pest control has occurred on this project.	Did not proceed	0%
5	Waitarere Beach Community Project	Weed control complete.	Complete	100%
6	Pukaha Mt Bruce	See Section 5 Collaboration projects.	Complete	100%
7	Te Āpiti Manawatū Gorge Enhancement	See Section 5 Collaboration projects.	Complete	100%

## Community Biodiversity projects

3.1.3 Overall, 12 of the 13 Community Biodiversity projects were completed in the 2018-19 year, with the exception of the Ohau Beach Walkway due to stakeholder support not eventuating. Highlights include the Cape Turnagain restoration project where a very rare and endangered ecosystem is being restored and protected by a collaborative group including councils, landowners, and the community. Another highlight is the recently completed Palmerston North to Linton Walkway which passes through the Kahuterawa Stream Biodiversity project which Horizons has been involved with for some time. This project adds to enjoyment of the outdoor environment by the many walkers and cyclists that travel along the path.

Table 7 Progress against Community Biodiversity projects.

Community Biodiversity projects	Update	Status	Result
8 Te Potae o Awarua Predator Project	See Section 5 Collaboration projects (see Northern Ruahine Battle for our Birds).	Complete	100%
9 Massey Hill	Weed control is complete for the year.	Complete	100%
10 Turitea Reserve	Pest animal control complete.	Complete	100%
11 Bushy Park	Pest animal control complete.	Complete	100%
12 Kahuterawa Stream Biodiversity project	Regular hare control is achieving good results. Planting of the Palmerston North to Linton walkway/cycleway, which passes through the Kahuterawa project, was undertaken.	Complete	100%
13 Foxton River Loop	<b>Save our River Trust</b> (SoRT) are organising a planting job that will use all the budget for this project.	Complete	100%
14 Manawatū Estuary & Predator project	See Section 5 Collaboration projects.	Complete	100%
15 Awahuri Forest - Kitchener Park	Streambank protection works have been completed on a section of the Makino Stream. New solar-powered lights have been installed in the car park. As part of the Tū Te Manawa project, Ngāti Kauwhata will be erecting one of the eight educational whare in the Park.	Complete	100%
16 Ahimate Reserve (previously Waitoetoe Park)	Horizons' share of the weed control maintenance and planting of the greater park area has been spent and any additional costs will be paid by <b>Palmerston North City Council</b> (PNCC) as previously agreed. About 3,000 plants were planted in May-June.	Complete	100%
17 Gate Pa Bush Restoration	Weed control work has been completed.	Complete	100%
18 Ōhau Beach Walkway	<b>Horowhenua District Council</b> (HDC) has confirmed this project will not proceed in the current financial year. Savings have been redirected to the Cape Turnagain project.	Did not proceed	0%
19 Cape Turnagain	Horizons' stakeholder contribution has been paid for this year.	Complete	100%
20 Genesis Moawhango River Restoration	Willow removal undertaken.	Complete	100%

## Community Grant projects

- 3.1.4 Community Grant projects were funded through a grants process run in April-May 2018, with 12 projects successful. A further two projects from the previous year were extended into the current year to enable their completion. Applications for the following financial year open in April and close in May.
- 3.1.5 Results of the 14 Community Grant projects is shown in the table below, and all projects have been completed with a significant input from the communities involved to deliver these projects.

Table 8 Community Grant projects completed.

Community Grant projects	Update	Status	Result
21 Bulls River Users Group	Project completed.	Complete	100%
22 Kaitieke School	Planting completed.	Complete	100%
23 Te One Bush Restoration Project	Project completed.	Complete	100%
24 Kimbolton School	Project completed.	Completed	100%
25 Mount Biggs School	Project completed.	Completed	100%
26 Progress Castlecliff, Whanganui	Project completed.	Completed	100%
27 Kai Iwi School	Planting completed.	Complete	100%
28 Puddleducks Montessori	Planting completed.	Complete	100%
29 Milson Scout Troup	Project completed.	Completed	100%
30 Timona Park Orchard Trust	Project completed.	Complete	100%
31 Matipo Community Development Charitable Trust	Project completed.	Completed	100%
32 South Makirikiri School	Project completed.	Completed	100%
33 Kairanga School (carried forward from last year)	Wetland project completed and grant claimed.	Completed	100%
34 Bushy Park community project (carried forward from last year)	Project completed.	Completed	100%

## 4 Regional Park Management

### 4.1 Activity Overview

- 4.1.1 The work at Tōtara Reserve Regional Park over the 2018-19 year focused on remediation of the June 2018 flood damage, enhancing flood protection, some works around safety in the park including management of trees, additional signage and reviewing pest management.
- 4.1.2 The Annual Plan target was met (table below) and the Annual Report was provided to the Environment Committee in May 2019.

Table 9 Progress update for the Regional Park Long-term Plan target.

LTP Performance Measure	Target	Completed	Result
Annual report on the management of Tōtara Reserve Regional Park for biodiversity and recreational values, including managing the camping facility.	1	1	Achieved

## 4.2 Totara Reserve Regional Park Summary

### Activity in 2018-19

- 4.2.1 The budget for 2018-19 provided a similar quantum of overall rate funding to the previous year and included a forecast of increased revenue due to increases in the camp fees. This additional revenue has been utilised to fund additional expenditure to maintain the campground and facilities.
- 4.2.2 A significant flood event on 12 June 2018 sent a great deal of water through the Kahikatea campground and deposited silt over much of the camping area and in the ablution block. The flows were so strong that the water crossed Churchill Drive into the forest and exited right behind the ablution block in the Kereru campground, resulting in further water damage and silt deposition there and in the adjacent playground.
- 4.2.3 The first few months of this financial year were dedicated to repairing the damaged assets and returning the campgrounds to a fit state in time for camping season. It included replacing all the “softfall” bark mulch under and around the playground equipment and replacement of carpet and GIB® board in the Kereru ablution block. Just over \$20,000 of the clean-up and repair costs were able to be claimed back on insurance but some items, such as repairing scoured tracks and re-grassing the deposited silt, had to be taken out of the operational budget.
- 4.2.4 The budget for flood protection works was prioritised to upgrade the flood protection levels in the Kahikatea campground. Other areas of the Regional Park that required bank protection works were not able to be addressed with available budget and the river took away another section of walking track on the Gilchrist Loop. A new track has been created in the area, routed well away from the current river course and bypassing the former poplar nursery – a site that our staff and contractors assessed as becoming increasingly dangerous due to the age and instability of those trees.
- 4.2.5 Several trees and branches that posed a threat to visitors in the campground and around Camp Rangī Woods have been removed.
- 4.2.6 Campground fees were raised this year with powered sites going from \$20/night to \$35/night and unpowered sites from \$12/night to \$15/night. Despite the expected minor drop in patronage, campground income exceeded \$50,000 – up by more than \$17,000 on the previous financial year. Campground numbers were 3,464 camper nights for the 2018-19 period.
- 4.2.7 The weed control programme continued to make good progress against the highest priority weeds in and around the Regional Park. Of special note, the biological control agents for Tradescantia are showing plenty of promise. A leaf spot fungus will be added to the programme next year to go along with the three species of beetle currently in the establishment phase.



- 4.2.8 Animal pest control has primarily been targeted at possums, and staff will be looking to increase the number of bait stations through the interior of the forested areas. Wasp control has also undertaken in response to higher wasp numbers around the campgrounds later in the camping season.
- 4.2.9 The Totara Reserve Advisory Group had a strategic planning workshop in February and will follow that up with another one later in 2019. The draft strategic plan is being based on the successful Te Āpiti Manawatū Gorge Governance model of 4 pillars – Biodiversity, Cultural, Recreation and Education.
- 4.2.10 A tender process is underway for the Totara Reserve Regional Park campground maintenance contract and will be posted on the Tenderlink website. The new contract will be for a three year period.
- 4.2.11 The necessary safety upgrade to the effluent treatment area has been scheduled for the 2019-20 financial year, along with several other CAPEX items, including sealing roads.
- 4.2.12 Additional boardwalks and steps planned for the Fern Walk this year were delayed due to the flood repair costs that were not able to be claimed on our insurance.

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## 5 Collaboration Projects – Horizons / Department of Conservation (DOC)

### 5.1 Activity Overview

This report captures some Horizons and DOC collaborative projects that are not covered elsewhere in Environment Committee reports.

### 5.2 Activity Highlights

#### Kia Wharite

- 5.2.1 Mangapurua – Whitianga Aerial Pest Operation: The operation in the Mangapurua-Whitianga blocks has been completed. This included 28,871ha of conservation land and 2,061ha of Whitianga Trust land. Post-operation rat monitoring showed tracking rates had fallen from 67% tracking to 0% post-operation. This is a good outcome likely due to high bait uptake with a good period of fine weather after toxin application. Bite Mark Index (BMI) monitoring with waxtags for possums resulted in pre- and post-percentages of 27% and 15% respectively, well within the less than 25% BMI target. Carcass monitoring has been completed with degradation of carcasses assessed as safe. The caution period has expired. Warning signs are being removed.
- 5.2.2 Whanganui National Park (part of Kaukore Reserve) pest control: Nga Whenua Rahui was given permission through the Department to control possums in the reserves in and around Pipiriki Township. These blocks include an area of 654 hectares and are being controlled with the use of Pestoff Decal in bait stations. This operation will continue through to early 2020.
- 5.2.3 Predator trapping continues in the upper and lower Retaruke River catchment as well as the Aramahoe Reserve and on Ohorea Station. Catch rates have dropped off significantly in the Aramahoe Reserve following the ground 1080 work undertaken in the area in autumn.

#### Campsite Trapping

- 5.2.4 Self-resetting traps have been maintained and checked monthly at hut and campsites on the Whanganui Journey throughout the year.

#### Weed control

- 5.2.5 Weed control has been completed within the Whanganui River trench. This work specifically targeted control of tutsan, Japanese walnut and Brush wattle. These species were controlled from Pipiriki to Poukaria campsite. A total of 102 tutsan, 297 wattle and 2933 walnut plants were removed from the river trench.

#### Goat control

- 5.2.6 Goat control has been completed. Both ground and aerial control were used. The completed set of data is yet to be fully analysed.

## **Whio**

- 5.2.7 Whio: There was a total of 30 pairs seen over the two catchments with 25 fledglings. Checks on the predator network with annual maintenance will be conducted over the winter months.
- 5.2.8 Twelve captive-bred whio were released on the Kaiwhakauka stream on 23 January 2019. It was thought best to keep this release low key to enable it to go ahead without holding the birds for too long. Members of Te Roopu Mana Whenua (TRMW) supported the day. Dan Steele attended as the adjoining landowner.
- 5.2.9 Twelve whio were released on the Manganui o Te Ao on 6 March 2019. Rangi Bristol and Aiden Gilbert, members of the TRMW were present along with DOC staff, Horizons councilors and staff and tamariki from Orautoha, Raetihi and Ohakune kura. An education programme was held with the tamariki in the afternoon. This event was well attended by the community.

## **Kiwi**

- 5.2.10 Long-term monitoring on the kiwi population in the Whanganui National Park was conducted in May-June 2019 with acoustic recorders. This was a follow up from the previous year in which the recorders failed. These sounds recordings will be analysed over the winter months.

## **Te Āpiti Manawatū Gorge Project**

- 5.2.11 Rat control was carried out in South side of Manawatu Gorge in April 2019. Diphacinone was laid by a contractor.
- 5.2.12 A final decision around possum control in Manawatu Gorge is still pending but it is likely there will not be aerial 1080 operation. Possum control will more likely be by a ground based method. Discussions are taking place for a collaborative approach between Council Regional Response Team and DOC.
- 5.2.13 There is a Possum fur trapper currently working in the Ballance end of Gorge.
- 5.2.14 Volunteer group predator trapping is ongoing.
- 5.2.15 In late July/August the Manawatu Gorge Loop Track on the Tararua District side of Te Apiti is being upgraded. Actual dates are still being confirmed by the contractor and will be subject to weather conditions. The planned work includes track re-formation, water table control and track re-surfacing. The works will bring the track up to a suitable standard to match its popularity and use. The track will be closed for a short 7-10 day period, for the duration of the works. Alerts will be in place and we will contact the i-Sites directly.
- 5.2.16 1 km distance markers have been installed on main walking track in June 2019.

## Northern Ruahine Battle for our Birds aerial 1080 operation

- 5.2.17 Consultation is underway for the Battle for our Birds aerial 1080 operation as part of Tia kina Nga Manu, in response to the major masting event through the northern end of Ruahine Forest Park. Rodent numbers are increasing at this site.
- 5.2.18 Recent mean rat tracking index per line showed an increase from 27% in Feb 2019 to 61% in May 2019.

Monitor Event Year	Monitor Event Quarter	Monitor Event Name	Sub Survey	Number of Lines	Mean Rat tracking rate per line	SE_ Mean Rat tracking rate per line	Mean Mouse tracking rate per line	Mean Mouse tracking rate per line
<b>2019 Feb</b>	1	North Ruahine Q1	Rodent 1 day	16	27%	6%	16%	5%
<b>2019 May</b>	2	North Ruahine Q2	Rodent 1 day	16	61%	6%	11%	3%