

Submission

On

**Te āwhina I te taiao me ngā tāngata kia puāwai
Helping nature and people thrive**

**Exploring a Biodiversity credit system for Aotearoa New Zealand –
Discussion document.**

Submission to:

Ministry for the Environment
Department of Conservation

10 November 2023

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Appendix 1: TPL Stewardship Projects 2023, Manulife

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2.0 Submitter

The Forest Owners Association (FOA)

The New Zealand Forest Owners Association Incorporated (FOA) is the representative membership body for the commercial plantation forest growing industry. FOA members are responsible for the management of approximately 1.2 million hectares of New Zealand's plantation forests and over 70% of the annual harvest.

In 2023, the forest growing sector was worth \$6.69 billion in export value and has a 12% share of rural land use. The Ministry for Primary Industries expects forest product export values to exceed \$9 billion by 2030.¹

The Forestry Sector Environment Committee² includes representatives from leading forest entities and the individuals represented are themselves New Zealand's subject matter experts in forestry environmental science. The committee includes representative from the Farm Forestry Association the New Zealand Institute of Forestry and Scion.

3.0 Introduction

We thank-you for the opportunity to provide feedback during this early design phase of a biodiversity credit system (BCS) for New Zealand. The forestry sector will be uniquely affected by a land-based biodiversity credit system. Forest owners provide biodiversity and ecosystem services often at a landscape scale as a co-benefit alongside commercial forestry operations. In their day-to-day activities forest managers are intimately involved with the management of New Zealand's biodiversity in reserves, river corridors and where rare or threatened flora and fauna species make plantation forests their habitat.

FOA acknowledges the gravity of the biodiversity crisis in New Zealand, and we recognise the importance of biodiversity improvement at scale. The forestry sector can play an important role in this. We are supportive of a BCS. As knowledge holders on the management and establishment of trees, forest owners are well placed to support the Government in the design of a BCS.

¹ <https://www.mpi.govt.nz/dmsdocument/41319-fit-for-a-better-world-background-analysis-on-export-earnings-in-the-primary-sector>

² <https://www.nzfoa.org.nz/committees/environment>

4.0 Background

The area of native reserve managed within the production forest estate is not known definitively however a survey of Forestry Sector Environment Committee and FOA members provides an estimate. The results of that survey showed that of the 1.3 million hectares surveyed, 175,000 ha or 13% was made up of indigenous forest reserve.

Of the 1.8M ha of plantation forests in New Zealand, 1.2M ha is certified by the Forest Stewardship Council (FSC).³ FSC is an international, non-profit organisation which independently certifies the environmental, social and economic performance of standard holders. To meet FSC standards forest managers must identify, set aside and protect at least 10% of their forest area as native reserve. In most instances forest owners exceed this. For example, 27% of the forested area managed by P F Olsen and 25% of the area managed by Nga Tahu Forest Estates Limited is set aside as indigenous reserve. In rare instances where a certified forest owner cannot meet the 10% requirements for native forest reserve areas, they must undertake offsetting activities such as investment in nature positive projects.

A large proportion of the plantation forests in New Zealand, approximately 35% are owned by Māori.⁴

Many species of native fauna, in particular the insectivores, thrive within pine forests with good pest and predator control. Our members support numerous biodiversity projects around New Zealand working in partnerships with ENGOs such as Save the Kiwi and Wingspan; with community trusts; and with iwi. Funding towards industry good biodiversity initiatives is also provided via the harvested wood levy⁵. FOA has developed a suite of guides to support the protection and management of rare species in pine forests alongside forestry activities⁶. We have provided a case study from Manulife Investment Management (NZ) Limited (Manulife) as Appendix 1. It provides an example from just one forest company of the numerous projects that are being supported by the sector.

Funding for biodiversity projects lead by the sector is difficult, preference is typically given to community groups and whilst these projects are important, such projects have often explicitly excluded native reserves or habitat within plantation forests. As Jobs for Nature funding is running out forestry companies are often picking up the slack, such is the case in Pureora Forest (refer to Appendix 1).

5.0 Design of a BCS

Whilst supportive of a BCS we note that there is considerable complexity to be resolved to enable a viable, stable BCS that will attract willing participants. Design of a BCS should be based on tested, science-led, evidence with in-depth consideration given to any possible unintended consequences or perverse outcomes. FOA is supportive of the concept of net gain, where net biodiversity increase is achieved via a species level approach over the rotation of a forest.

³ <https://anz.fsc.org/>

⁴ <https://www.nzfoa.org.nz/resources/publications/facts-and-figures>

⁵ Administered by the [Forest Growers Levy Trust](#).

⁶ <https://rarespecies.nzfoa.org.nz/>

As discussed in Section 4.0 above, there are numerous existing biodiversity projects within the sector, we are cautiously optimistic about a credit system that recognises the efforts of the forestry sector for the ecosystem services and work undertaken. However, we question how a BCS will reward existing projects equitably whilst incentivising new projects.

FOA acknowledges the success of the Sanctuary Mountain Maungatautari biodiversity credit offering. We encourage the Government to engage with the forestry sector to develop further pilot studies or expand existing projects set in productive forests to test implementation of a BCS for forestry participants. The viability of a BCS will also need to be tested across the primary sector in various land use settings.

We note the newly gazetted National Policy Statement for Indigenous Biodiversity (NPS-IB) will require councils to prepare biodiversity management plans. Indigenous biodiversity will become (if not already) Significant Natural Areas (SNAs), the approach will capture SNAs ubiquitously without a prioritisation mechanism to allocate projects and resources to areas with the best biodiversity attributes. We are supportive of a mechanism within a BCS which will enable the strategic importance of the most significant areas of biodiversity to be recognised and effort prioritised in these areas. FOA is supportive of regional level prioritisation, where the joining up of smaller siloed projects can be explored and progress is measured towards national strategies such as Predator Free 2050 (PF2050) and Te Mana o te Taiao.

We support two tiers of BCS which would accommodate either 1.) small scale project level biodiversity credits or 2.) larger landscape level projects which are outcome focused, as follows:

1. Project level credits:

- existing projects or additionality could be recognised.
- will be easily achievable for smaller land-owners or community groups.
- easily monitored/measured.
- can accommodate time or budget constraints more easily.
- will need little agency involvement.

2. Outcome focused credits:

- Large scale, potentially joining up smaller siloed projects.
- Can involve a number of parties.
- Can accommodate projects planned over a long period of time, with a sustained commitment to funding.

We caution the Government against generating greater perverse outcomes with hasty blanket planting of native trees. Planting of native trees should be considered, nuanced and based on robust ecological advice. FOA's submission to the Ministerial Inquiry into Land Use in Gisborne and Wairoa⁷ details the potential pitfalls of ill-considered native tree planting such as leaving erodible hillsides vulnerable for the much longer window of time that it takes native trees to establish, issues around provenance and is their adequate browsing pest control in place for native trees to survive.

⁷ <https://www.nzfoa.org.nz/resources/file-libraries-resources/submissions/2023/875-ministerial-inquiry-into-land-uses-associated-with-the-mobilisation-of-woody-debris-including-forestry-slash-and-sediment-in-tairawhiti-gisborne-district-and-wairoa-district/file>

We view the Government as having a critical role in promoting research and development associated with development of standardized and effective biodiversity measurement and monitoring methodologies, technology and infrastructure (national data sets and data platforms). Research to understand the establishment of native trees in all landscapes is also important.

6.0 Learnings from the NZ Emissions Trading Scheme

There is much that can be applied from the development of the New Zealand Emissions Trading Scheme (ETS). Since the inception of the ETS, participants have experienced almost continual change. We urge the Government to take the time to develop a stable BCS framework that will not require multiple iterations of consultation and change. These cumulatively have led to a loss of credibility and a withdrawal of participation in the ETS. A stable, Government led framework for a BCS needs to be designed from the outset so the progress on biodiversity improvement is not jeopardised. As such, we recommend the following:

- The scheme cannot operate in isolation, it must be synonymous with national strategies such as the NPS-IB, PF2050 and Te Mana o te Taiao.
- Metrics for measurement and monitoring biodiversity improvement should be developed using the best available science.
- Measurement and monitoring should be undertaken by independent on-the-ground auditors. FSC auditors could potentially provide this service, we recommend engagement with FSC during design of these components of a BCS.
- The system must be designed with stability and predictability built in so that participants can commit to long term projects and make informed commercial decisions.
- It is important that the system is not used for undesirable behaviour.
- The cost of participating in the system, i.e the costs associated with monitoring, cannot outweigh the benefits earned. Money spent on ecologists and consultants proving biodiversity outcomes directs resources away from pest control, fencing and other key requirements for biodiversity gain.
- We urge the Government to develop a BCS that acts independently of the ETS. A system that runs in parallel but separately is key. Participants in both credit schemes should have choices about whether they stack credits earned by participating in both schemes or participate in one of the other. Allowances for flexibility should be built into both schemes.
- It is important that the cost of the platform which hosts the BCS is not excessive. The ETS platform, Tupu-ake, costs \$30M annually to run. Forestry participants are being asked to pay for a significant proportion of these costs. This has undermined the willingness of would-be participants to participate in the ETS and ultimately generated perverse climate outcomes, by acting as a deterrent for planting trees.
- The Government needs to help in the development of a BCS market.
- It is important that a BCS is simple and practical to use for all participants, from all walks of life. If expensive consultants are required to participate in the system, then this will be a deterrent.

7.0 Consultation questions

Question 1: do you support the need for a BCS for New Zealand?

FOA is supportive of a BCS in New Zealand, we acknowledge the gravity of the biodiversity crisis and are supportive of a system which incentivises biodiversity improvement in New Zealand. If the system is designed well, it could be the most effective pathway towards large-scale indigenous forest restoration as well as supporting biodiversity projects within productive landscapes. The forestry sector can play an important part in this.

Question 2: Should credits only be used to recognise a) positive actions to support biodiversity or b) should a BCS be used to recognise positive actions to support biodiversity and actions that avoid future decreases in biodiversity?

FOA is supportive of option b. A BCS should be able to support both positive actions to enhance biodiversity but also credit actions which avoid future decreases. This is particularly relevant in the context of costly predator and pest control which if not maintained, places constant pressure on native flora and fauna. Predators and pests are a problem across all landscapes including commercial forests, landscape level predator and pest control is key to large scale positive improvement to biodiversity outcomes.

Question 3: Which scope do you prefer for a biodiversity credit system? a) focus on terrestrial land environments, b) focus freshwater and estuaries or c) include both these environments and include coastal marine environments?

Option c. Biodiversity credits should be recognised equitably across all landscapes, terrestrial or marine; commercial forests or farmland; indigenous forests or wetlands. Each biodiversity outcome should be assessed on the merits of the biodiversity improvements made. The key will be to make sure that the biodiversity credits awarded are based on evidence. Pilot studies recognising biodiversity credits should be carried out across a range of different settings and environments.

Question 4: Which scope do you prefer for land-based biodiversity credits? a) Cover all land types, including both public and private land including whenua Māori. b) Be limited to certain categories of land, for example, private land (including whenua Māori).

Option b. It is our view that a BCS should be targeted at private land (including whenua Māori).

To align with other credit offerings in New Zealand public land should be excluded.

Supply of units is key, it is important to avoid an oversupply and therefore participation should be limited to private land holders.

In the case of large landscape scale projects, DoC may be a collaborator. It is important that their ineligibility does not exclude them from such projects.

Question 5: Which approach do you prefer for a biodiversity credit system? a) Based primarily on outcome. b) Based primarily on activities. c) Based primarily on projects.

FOA supports options a and options c. Our reasoning for this is set out in Section 5.0 above.

Question 6: Should there also be a requirement for the project or activity to apply for a specified period to generate credits?

Yes. In order to measure and monitor success the project will need to be time bound; success will need to be measured against project milestones. Many businesses participating in a BCS will be required to report on time bound deliverables. Timescales could be long-term.

Question 7: Should biodiversity credits be awarded for increasing legal protection of areas of indigenous biodiversity (eg, QEII National Trust Act 1977 covenants, Conservation Act 1987 covenants or Ngā Whenua Rāhui kawenata?)

No. Legal protection does not necessarily equate to biodiversity improvement. Much of New Zealand's biodiversity continues to decline despite having had legal protection in place for many years. Biodiversity credits should only be issued for measurable biodiversity improvements.

Question 8: Should biodiversity credits be able to be used to offset development impacts as part of resource management processes, provided they meet the requirements of both the BCS system and regulatory requirements?

FOA does not support the use of offsetting either within the Natural and built Environment Act or within a New Zealand BCS. We are concerned that the ability to offset will allow would-be polluters to buy the right to pollute using the BCS.

Offsets are intended to offset an adverse impact, to be able to offset an impact a metric would need to be attributed. The system will need to decide equitably what level of impact requires offsetting and what value of biodiversity credit is required to mitigate this. Offsetting would add a high level of complexity to a BCS and would be difficult to apply consistently.

Question 9: Do you think a BCS will attract investment to support indigenous biodiversity in New Zealand?

Yes. Natural capital and the measurement of biodiversity impact is a rising global mega-trend, a Taskforce for Nature Based Disclosures announced a framework for biological diversity in September of this year. Increasingly corporate entities will be required to include biodiversity in their sustainability reports. Financial institutions will be seeking nature-based disclosures as part of lending and investment arrangements. As this information is gathered and consumer demand drives greater transparency, corporates will be looking to balance perceptions and transition their operations to be nature positive. One of the mechanisms for achieving this will be a BCS.

Question 10: What do you consider the most important outcomes a New Zealand BCS should aim for?

A BCS should be aiming to achieve net gain in biodiversity at national scale across a range of physical settings. It is urgent that we reverse the decline of native fauna and we protect, enhance and expand critical ecosystems in New Zealand.

Question 11: What are the main activities or outcomes that a BCS for New Zealand should support?

The discussion document provides a good summary of these. The key activities/outcomes are repeated below:

- maintaining or restoring areas of existing indigenous biodiversity (shrublands, native grasslands, tussock lands, natural and regenerating forests and wetlands) by improving ecosystem integrity within significant natural areas
- expanding indigenous biodiversity around significant natural areas (for example, creating buffer zones and ecological corridors around and between forest remnants, natural wetlands or other natural areas)
- creating new areas of indigenous biodiversity (for example, by planting indigenous forest species, supporting transition from exotic to native forests, re-establishing wetlands, riparian planting using native plants alongside lakes, rivers and streams, recreating seagrass beds, native grasslands and shrublands)
- specific interventions for indigenous or taonga species (eg, to improve species number, diversity, range)
- Māori-led initiatives to restore, maintain and/or improve indigenous biodiversity in accordance with local expressions of mātauranga Māori.

Question 12: Which principles do you consider should be the top four to underpin a New Zealand BCS?

Principle 1 – Permanent or long-term (eg, 25-year) impact

Principle 2 – Transparent and verifiable claims

Principle 3 – Robust, with measures to prevent abuse of the system

Principle 7 – Maximise positive impact on biodiversity

There is some overlap between the principles set out, principles 3 and 6 are complimentary.

Question 13: Have we missed any other important principles?

It is important to align with national strategies such as such as the NPS-IB, PF2050 and Te Mana o te Taiao. But also, it is important to have regional oversight. Regional steering committees should be set up to connect would-be collaborators, to ensure that landscape level biodiversity improvement is being achieved and avoid siloed work.

Question 14: What assurance would you need to participate in a market, either as a landholder looking after biodiversity or as a potential purchaser of a biodiversity credit?

A stable, predictable biodiversity credit market is key to participation. From experiences with the ETS, FOA considers policy stability, clarity in the rules, clarity in criteria used in focusing BCS eligibility, simplicity of administration and consistency/equity as being critical to attracting participants. The cost of participating in the system cannot outweigh the benefits (i.e. the cost of consultants associated with monitoring) and the fees associated with participating in the system should not be a deterrent. A BCS needs to be a commercially attractive proposition to investors and landowners/managers. Failure to achieve these is likely to severely undermine interest in any system.

Question 15: What do you see as the benefits and risks for a biodiversity credit market not being regulated at all?

There needs to be some form of regulation to ensure that undesirable or dishonest behaviour is avoided.

Question 16: A BCS has six necessary components (see figure 5). which component(s) should the Government be involved in?

It is difficult to comment at this early stage in the design of a BCS on what the Government's involvement should be (i.e. whether a projects focused BCS or an outcomes based system will be used).

A projects based system, for smaller projects, will require minimal Government involvement - endorsement of the BCS and ensuring alignment with national and regional strategies.

For larger scale outcomes focused projects, Government involvement may be necessary in many parts of the process to ensure transparency, legitimacy, efficacy of outcomes, alignment with national or regional priorities and measurement / monitoring systems.

Question 17: In which areas of a BCS would government involvement be most likely to stifle a market?

We urge the Government to take the time to develop a considered science-based framework that is tested across multiple landscape settings and environments to avoid future iterations of consultation and change. Stability of the system is key to participation in a BCS. We reiterate that Government should look to the ETS as an example of what not to do.

Any uncertainty over the longevity of a BCS is likely to undermine the system. Investors need to be able to rely on expected outcomes being achieved over the timeframes agreed to.

Question 18: Should the Government play a role in focusing market investment towards particular activities and outcomes and if so why? For example, highlighting geographic areas, ecosystems, species most at threat and in need of protection, SNAs, certain categories of land.

We reiterate that regional authorities should be involved with setting regional priorities specific to that region's priorities and specific characteristics. A regional steering group should be established to direct effort. There are already requirements under the NPS-IB to prepare regional strategies for biodiversity.

Question 19: On a scale of 1, not relevant, to 5, being critical, should a New Zealand BCS seek to align with international systems and frameworks?

FOA is supportive of alignment with international systems and frameworks where practicable. Any adopted system must be able to work in New Zealand.

It seems appropriate that a New Zealand BCS should have strong alignment to the Biodiversity Credit Alliance to underpin its international credibility. Clear alignment with *any* internationally credible system is desirable given capital flows for the system are likely to be heavily internationally weighted.

Question 20: Should the Government work with private sector providers to pilot BCS(s) in different regions, to test the concept? If you support this work, which regions and providers do you suggest?

FOA strongly supports this approach. Understanding of implementation for a BCS is important, it is critical that the system is tested in differing physical settings. Real life case studies will be helpful for future BCS participants.

The Forestry Sector Environment Committee is well placed to identify pilot sites.

Question 21: What is your preference for how a BCS should work alongside the ETS or voluntary carbon markets?

Option a, little/no interaction, a BCS that focuses purely on biodiversity, and carbon storage benefits are a bonus.

FOA is strongly opposed to a BCS which interacts with the ETS. Since the inception of the ETS, participants have experienced almost continual change and multiple iterations of consultation. These cumulatively have led to a loss of credibility and a withdrawal of participation. Embedding a BCS in the ETS will add further confusion and will provide a further deterrent for participation in the ETS as well as avoidance of participation in a conjoint BCS. Ultimately this will have perverse outcomes for both climate change and biodiversity.

A system that runs in parallel but completely separately is preferred. We have provided further comments in Section 6.0 above.

Question 22: Should a BCS complement the resource management system? For example, it could prioritise SNAs and their connectivity identified through resource management processes. Endangered and at-risk taonga species identified through resource management processes.

Almost any indigenous vegetation in New Zealand is an SNA. As discussed in previous responses, regional strategies which prioritise areas of biodiversity will be developed via councils and will be helpful to direct effort.

Biodiversity credits would be one way in which the costs associated with having SNAs or rare, threatened, and endangered species in commercial forests could be offset.

Question 23: Should a BCS support land use reform?

A BCS should be used to support but not replace other policy mechanisms in place to assist land use reform. Biodiversity credits would have the ability to unlock additional value to landowners of land which may no longer be suitable for productive land uses. It would also ensure that land asset values were not completely eroded. However, a BCS should not absolve the Government of any obligations it may have providing for a just transition.

8.0 Note on making this submission public

We do not object to the submission being made public.



Rachel Millar
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Appendix 1: TPL Stewardship Projects 2023, Manulife



Manulife Forest Management (NZ) Ltd

Taumata Plantations Ltd Stewardship Projects Overview

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1 Introduction

The following report summarises the stewardship programmes currently underway across the Taumata Estate. MFM (NZ) is certified to both FSC® (Forest Stewardship Council) and NZS AS 4708 which is in turn endorsed by PEFC (Programme for the Endorsement of Forest Certification). Both certification systems have detailed requirements around the management of indigenous biodiversity values in certified forests. The stewardship programme is designed to meet these requirements. Through these initiatives MFM (NZ) also seeks to create linkages with local communities and environmental groups to strengthen relationships and support the company's social license to operate.

The following report briefly summarises the key stewardship projects underway on the Taumata Estate.

2 Threatened species protection

2.1 General approach

Under both FSC and NZS 4708 certification, MFM (NZ) is required to identify any rare, threatened or endangered species known or likely to be present in our forests and put in place measures to protect populations from both significant impacts of forest operations and other known threats.

Through a review of species distribution information and advice from Department of Conservation specialist staff, MFM (NZ) has identified 24 fauna species and 6 plant species that are found in Taumata Plantations forests and are listed as threatened or at risk. Plant species are all located in indigenous reserves, as would be expected. Fauna species include birds, bats, frogs and fish species which are located both in protected indigenous reserves and in some cases make use of the production forest as habitat.

The NZ Forest industry has been developing species management guides for the key species known to occupy production forests in NZ with input from species experts. To date guides have been developed for NZ Falcon, North Island Brown Kiwi, long-tailed bats and weka, all of which are found in Taumata's forests.

Where necessary MFM (NZ) has put in place management plans to protect threatened species that are present. The following is a summary of key threatened species recovery projects currently taking place on the Taumata Plantations estate.

2.2 NZ Falcon (Karearea)

The NZ Falcon (Karearea) is the only surviving bird of prey endemic to NZ and is classified as a threatened species. Falcon are a common site in plantation forests throughout most parts of NZ. A number of PhD studies have been carried out of falcon in NZ pine forests, supported by the industry, to better understand how they use our forests and what we can do to enhance their survival. Studies have confirmed falcon are successfully breeding and rearing chicks in the pine forest habitat. They nest in recently harvested areas near to a mature forest edge, and feed on the abundant insect feeding birds found in these areas. The highest recorded density of falcon nesting sites in NZ is in a production forest in the Central North Island.

Protocols for managing falcon have been developed from the outcomes of past studies. Staff and contractors keep an eye out for falcon and in particular signs that they are nesting in the forest, easily identified by aggressive dive bombing behaviour. If a nesting site is located the protocols require that we cease operations within 200m of the nest until the chicks fledge. This can generally be achieved fairly easily by adjusting the sequence of harvest in a block or rescheduling operations such as planting or mechanical land preparation in the area to avoid disturbing the nest.



2.3 North Island Brown Kiwi

Kiwi were once widespread in NZ but have been greatly reduced by predation, in particular by dogs, cats and mustelids (stoats, ferrets and weasels). Adult kiwi are relatively robust, but kiwi chicks are very vulnerable to predation, with typically only 5% chick survival in the first year in the absence of pest control. Experts predict that kiwi will become extinct in the wild on mainland NZ unless active predator control is undertaken.

Northland as a region has the highest remaining population of North Island Brown Kiwi. Many of Taumata Plantations Ltd Northern forests contain kiwi, making use of both the native reserves and plantation forest for habitat. MFM (NZ) works closely with the Northland Kiwi Recovery Group to understand how best to manage kiwi populations and an MFM (NZ) staff represents the Northland forest industry on this group.

Taumata's first kiwi recovery project to get underway was in Whanui Forest in 2013 and this has been gradually extended over the years through additional MFM (NZ) managed projects and partnering with local kiwi recovery groups. Taumata now has approx. 12,600 hectares of forest under predator control for kiwi.

Forest	Area of Taumata Forest under predator control (ha)	Community Projects/partnerships
Whatoro	2,523	Whatoroa CPCA (MFM & three neighbours)
Whanui	1,142	Kiwi Link
Ngunguru	1,047	Taheke Landcare Group
Gammons/Otaenga	2,690	
Waipunga	829	
Rakautao	200	Ngawha
Waipu	4,185	Piroa Brynderwyns Landcare / Maraenui Conservation
Total area	12,616 ha	

It is hoped that these and other projects will help to create a network of protected habitat to help halt the decline of kiwi in Northland.

All contractors and MFM (NZ) staff working in Northland forests are provided with training to identify kiwi sign, and procedures to follow if kiwi are encountered. Where nest sites are found within harvest areas that cannot be protected, MFM (NZ) coordinates with DOC, Northland Regional Council, or the Whangarei Bird Recovery Centre.

2.3.1 Whatoro Kiwi Recovery Project

One of MFM (NZ)'s first kiwi recovery projects in Northland is the Whatoro CPCA, based in Whatoro Forest, Western Northland. Whatoro Forest is located in an area with naturally high kiwi populations and was also selected as a priority due to its location between two Department of Conservation (DOC) forests one of which has intensive predator control programme for kiwi protection. MFM (NZ) joined forces with the Northland Regional Council (NRC), Department of Conservation and neighbours to develop a CPCA over approximately 2,500ha including Whatoro forest and two neighbouring farms. Northland Regional Council provided financial support for the initial set up and running of the project, with MFM (NZ) and the three neighbours responsible for longer term management.



The main objective of the project has been to control kiwi predators within the project area, to extend the area of protected kiwi habitat and enhance kiwi survival. The project was finalized and signed off in mid-2013, with predator trapping commencing in September 2013. Kiwi listening takes place annually to monitor the success of the project. Trap catch records are also maintained to help priorities trapping within the forest. Through the CPCA, MFM (NZ) and the adjacent landowners have made a long-term commitment to predator control in the area. The forest has now been under predator control for 9 years through a trapping programme with the key target being Mustelids and Feral Cats.

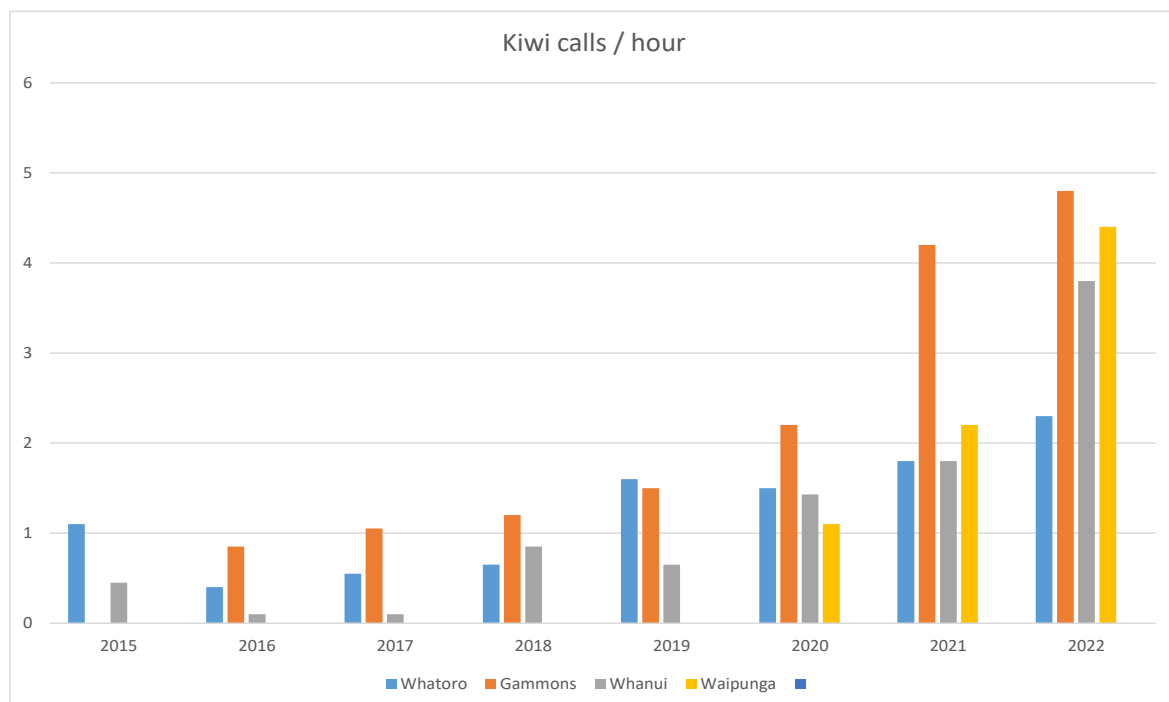
2.3.2 Mataraua Kiwi Recovery Project (Waipunga forest)

The community based Mataraua Predator Control Programme was formed in 2020 with Northland Regional Council, Department of Conservation, the Native Forest Restoration Trust, Northland Forest Managers and MFM (NZ) partnering to achieve a common goal – to provide a predator free environment where rare, threatened, or endangered species may once again thrive. The cornerstone species identified as being present these include North Island Brown Kiwi, Long tailed Bats and adjacent in Mataraua Forest, Kokako. This project was formed in 2020, with baseline surveys completed to confirm species presence. A trapping network has now been completed. Initial trapping results indicate that reasonable numbers of predators of kiwi have been removed. MFM (NZ) kiwi listening results indicate that this is having a positive effect on the kiwi population with calls already increasing from 1.1 – 4.4 calls/hr or an impressive 300% since establishment. The Mataraua Predator Control Programme is part of the Waipoua HVA.

2.3.3 Kiwi population monitoring

Kiwi surveys have been carried out in our forests for a number of years to identify kiwi presence and population density. Kiwi calling is undertaken during the mating season when calling is likely to be highest. In the past kiwi listening was undertaken manually with people out in forests at night recording calls. More recently the use of electronic listening devices had improved the efficiency of the process and enabled a wider range of forests to be surveyed. The recordings are analysed to identify the number of calls per hour as an indication of kiwi numbers.

The call count information is used to identify where kiwi are present and also to monitor success or our predator control projects. The graph below shows kiwi calls per hour averaged over the period in four MFM (NZ) forests where predator control is underway. The increasing kiwi numbers over the period is pleasing and is the result of both predator control, and in some cases release of additional kiwi into protected areas.



Call count monitoring results in four Taumata Forests

2.3.4 Raukumara Pae Maunga restoration project

The Raukumara Pae Maunga project is an iwi-led project in partnership with Government, established with the goal of restoring the Raukumara Range in the Eastern Bay of Plenty. The Raukumara's native forests have been heavily browsed by introduced possums, goats, deer and rats which have been destroying both the canopy and understory to the point that parts of the forest are at risk of collapse.

MFM (NZ) has become involved because a number of the forests that we manage on the Eastern Bay of Plenty run up into the Raukumara Range. The maori landowners of Houpoto Forest, which is leased by Taumata Plantations, approached MFM (NZ) regarding getting involved. Kiwi surveys have confirmed that a few kiwi are still holding on in the area of Houpoto Forest, a remnant of a once thriving kiwi population that has been almost completely decimated by introduced predators. The landowners supported the Kaimai Kaponga project to restore the biodiversity in their forest.



Kiwi caught on trail-cam by the Raukumara Pae Maunga project team in the Houpoto Forest area of the range – one of only a few remaining kiwi on the Raukumara Range

The first major step of the Kaimai Kaponga Project was a major 1080 drop completed in 2023 to remove animal pests over a large area of the Raukumara Range, including a significant proportion of Houpoto Forest. Taumata Plantations provided supplementary funding for the 1080 drop for the productive area of the forest included within the 1080 drop. Logistical support was also provided through the use of Houpoto Forest as a staging point for the drop, significantly reducing the cost of the operation by enabling the helicopter to fly from an elevated position closer to the range.

MFM (NZ) staff are in discussion with the landowners of Houpoto Forest about next steps to establish ongoing predator control in the forest. The long term goal is that once predator control is well established, further kiwi can be released into the area to supplement the remnant population and re-establish a healthy kiwi population on the Raukumara Range.

2.4 Pungapunga River Whio Project, Waituhi Forest

Blue duck (known by maori as whio), are a threatened species of duck found only in NZ, with an estimated total population of less than 3,000 birds. Whio, like many of New Zealand's indigenous bird species, have been affected by habitat loss and predation by introduced predators.

For a number of years staff had been aware that whio were present along the riparian margins of the Pungapunga Stream that runs through Taumata's Waituhi Forest (near Taumarunui) from Department of Conservation land. Pungapunga Stream's near natural state provides perfect habitat but predators are an ongoing issue. A 2009 survey confirmed four pairs of whio using the stretch of the river. In 2010 Taumata commenced a predator control programme with initial financial support from Horizons Regional Council and Genesis Energy (a power generation company which supports whio recovery projects). Over time, the project area has been extended to provide protection over a 5km stretch of the stream, with pest control efforts focused mainly during the breeding season.

Whio are strongly territorial and typically occupy a range of approximately 1kilometre. Recent whio surveys have confirmed 5 breeding pairs on the section of the river under control, so it is unlikely the resident population will increase, but the project will greatly enhance chick survival to repopulate suitable habitat in the adjacent Department of Conservation estate. To date the best breeding season was the summer of 2014/15 with 13 healthy whio chicks fledged from the project area.



Whio pair on the Pungapunga Stream, Waituhi Forest

2.5 Hochstetter Frog Management

Hochstetter's frogs are one of four ancient species of native frog endemic to New Zealand. Hochstetter's frogs were once widespread in New Zealand, but are now found only in a number of locations in the upper half of the North Island. They are semi-aquatic, living in damp areas around small upper catchment streams.

Populations of Hochstetter's frogs have been found in several MFM (NZ) Forests with the largest population in Taumata's forests being in Waipu Forest in Northland. The approach to management has been to undertake survey's prior to harvest to identify frog habitat. The harvest plan is then developed to minimise disturbance to frog habitat areas. At the time of replanting, frog habits are taken into account and if necessary planting is set back further to increase the protection to frog habitat areas in future harvest.



2.6 Mokaihaha Kokako Reserve, Kinleith Forest

Since 2014 Taumata has been making annual financial contributions to the Mokaihaha Kokako Trust to support predator control efforts in the Mokaihaha Ecological Area, adjacent to Kinleith Forest.

The Mokaihaha Ecological Area is the largest surviving block of native forest that once covered the Mamaku Plateau, it is also home to an important kokako population. According to the trust, the Mokaihaha kokako was the only viable unmanaged population, the population has never declined below 40 birds and is ranked in top three populations nationally. The trust aims to enhance the ecosystem, largely



through predator control. To further support the trust's activities, a trapping project was established in Kinleith Forest in 2020 to act as a buffer for the Mokaihaha Ecological Area. 65 double set DOC 200 trap boxes were funded and supplied by the Waikato Regional Council and are placed along Galaxy, Sutton, Star and Hughes Roads.

This project further expanded when the Kaimai Kaponga group took over trap checks. Kaimai Kaponga is a newly established hapu led conservation project focused on the restoration of the south mamaku. The project is being led by a subsidiary company of Ngati Tura Ngati Te Ngakau Hapu Trust located at Ngongotaha. The project is part of much larger initiative related to a series of conservation and pest management programmes for much of the Kaimai Mamaku ranges and which will be managed by the Manaaki Kaimai Mamaku Trust in close collaboration with Te Papa Atawhai.

3 Indigenous reserve restoration

3.1 Indigenous reserves in the Taumata Estate

Within the Taumata Plantations estate there is approximately 23,000 hectares of indigenous reserves. These include areas that were in indigenous forest remnants and set aside as reserve at the time of planting and also areas that have been retired and regenerated. Indigenous reserve areas in plantation forests have been protected under the NZ Forest Accord since 1991 under the NZ Forest Accord - an agreement between the NZ Forest Owners Association and a number of ENGO's. Many reserves in the Taumata estate have also been identified through regional and district plans as Significant Natural Areas and are therefore legally protected through rules in regional and district plans.

Both FSC and NZS4708 certification requires that the company clearly identifies a network of protected indigenous reserves and puts in place controls to protect reserves during operations and to manage any threats to those reserves. All reserves in the MFM (NZ) managed estate are mapped in the company's GIS mapping system and have been surveyed in the past by ecologists to establish the key indigenous values present and any threats to those values. Reserves are identified during the planning phase of operations, with controls put in place so that operations are undertaken in such a way as to minimise damage to reserves.

Driven largely by the requirements of FSC certification, MFM (NZ) undertakes an annual reserve management programme. Annual reserve work is prioritised based on the ecologist's recommendations, and in some instances by community interests. The following is a summary of some of the key reserve enhancement projects currently underway on the Taumata estate.

3.2 Wetland Restoration

Wetlands were once widespread across much of lowland NZ but, with draining of wet areas for farmland, the extent of wetland is greatly reduced. In the Waikato region it is estimated that less than 5% of the original wetland remains. In plantation forests drainage activity is not common and therefore wetlands are over-represented as compared to adjacent farmland.

All viable wetlands in MFM (NZ) forests have been identified and mapped as reserve. Many have also been identified as Significant Natural Areas under District Plans. A lot of the wetland area in our Central and Eastern region forests have been inundated with introduced weed species, in

particular Grey Willow. As an FSC initiative MFM (NZ) has undertaken a number of wetland restoration projects.

In Central region, to date, nine wetland restoration projects have been undertaken totalling approximately 130ha. Two of these projects have been completed with external financial support from the Waikato Ecological Enhancement Trust and South Waikato District Council respectively. Restoration projects have typically focussed on control of introduced weeds, to enable native vegetation to re-establish. Once fully re-established the thick sward of native vegetation should prevent re-infestation of exotic weed species and create improved habitat for native species. Following the harvest of plantation trees surrounding wetlands, staff review replant boundaries and where necessary the replant is setback from the wetland to create a protective buffer.

In the Taumata Eastern Forests, wetland restoration projects has focussed on the Houpoto Forest wetland and Te Ranginui Road wetland in Orete Forest. Being maori lease forests, the restoration work has been undertaken in conjunction with the landowners and with support from the Bay of Plenty Regional Council.



Lake Rd lake and wetland mapped as a Significant Natural Area by South Waikato District and identified as a 'High Conservation Area' under FSC. Wetland restoration has included increasing the riparian buffer following planting and restoration planting in native species in this buffer.



Tunnel Road wetland in Kinleith forest which contains Cordyline, manuka, pittosporum, hebe and regenerating kahikatea. Spot spraying was undertaken to control grey willow and blackberry.



Europa Road Bog in Kinleith Forest, a low nutrient bog containing Sphagnum, Astelia grandis and manuka. Restoration work has included removal of grey willow and wilding pines.



Moorhouse Rd wetland in Kinleith Forest which was heavily infested with the introduced species grey willow completely suppressing the native wetland vegetation. The top photo is immediately following the initial spray operation and below a year later showing the breakdown of the willow and regeneration of native wetland vegetation.



Opareiti Wetland a 45 ha wetland in Kinleith Forest. Control of grey willow and other weed species has enhanced regeneration of native species.



Te Ranginui Road wetland, Orete Forest. Restoration efforts have focussed on removal of grey willow and wilding pines, which has resulted in abundant regeneration of kahikatea.

3.3 Wilding Pine Control, Waihaha Forest

In 2021 Waikato Regional Council led a wilding pine control project on Department of Conservation land on the Western Bays of Lake Taupo adjacent to Taumata's Waihaha Forest on the western flank of Lake Taupo.

The overall project on DOC land was undertaken with Government funding, however the project organisers approached MFM (NZ) about extending the wilding pine control into contiguous reserves within Waihaha Forest. MFM (NZ) provided logistical support to enable access to the DOC estate through Waihaha and Taumata provided funding to undertake wilding control into reserves within Waihaha Forest, resulting in a better overall project outcome. The work was largely completed in 2022/23.

3.4 Dactylanthus recovery – Kinleith Forest, Taumata Central

Dactylanthus is a rare plant that is New Zealand's only fully parasitic flowering plant, growing largely underground with the plant growing from a stem attached to the root of a host tree. In response to Dactylanthus, the host tree's root moulds into the shape of a fluted wooden rose, which gives the plant its common name of 'wood rose'.

Dactylanthus are also unusual in that they are pollinated primarily by very rare short-tailed bats, along with mice and wasps. The host trees are very site specific, occurring only on the margins of podocarp forest in the regenerating shrub/hardwood areas containing mahoe, lemonwood, kohuhu, five finger and lancewood.

Dactylanthus was identified in Maroa Reserve in Taumata's Kinleith Forest near Tokoroa. Dactylanthus is vulnerable to damage by browsing animals, and in particular pigs. Protective stainless steel cages have been installed over the identified plant locations and the population is monitored annually with advice being provided by Dept of Conservation and representatives from the Rotorua Ecological Society.



3.5 Raukawa Totara Project

Raukawa are the Iwi (maori tribe) who traditionally inhabited the area around Kinleith Forest. In 2014 they approached management staff regarding their aspiration to establish a resource of plantation grown Totara for future cultural use by the Raukawa people. This was supported by the Taumata board and an area on Tawa Rata Rd in Kinleith Forest now known as ‘Taranaki’ was identified as a possible site. It had in the past been grazed and was overgrown with blackberry and willows. The site was cleared of weeds in early 2015 and in August 2015, Hancock Forest Management staff and Raukawa representatives gathered together to undertake the first planting on the site, supported by a large gathering of community supporters including children from local schools.

The advice from the indigenous tree specialists was to first plant a nurse crop of native species (manuka and pittosporum) and when this reached sufficient height, to under-plant the area with Totara to encourage straight tall trees.

The project is seen by Raukawa as a flag ship project with significant ongoing interest from their people. Unfortunately, plant survival has been a challenge but MFM (NZ) and Raukawa are continuing to work together to manage the site, with enrichment planting as required.

