



Phytophthora agathidicida
National Pest Management
Plan Review

March 2026

Independent report prepared for Ministry for Primary Industries

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consulting

This work was commissioned by MPI to document progress against the NPMP, inform future activities and support decisions and actions of Tiakina Kauri, and inform its Governance Group in setting future direction.

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Executive summary

Purpose

The purpose of this review is to document progress against the National Pest Management Plan (NPMP) for *Phytophthora agathidicida* (PA) and inform future activities. It supports Tiakina Kauri, the management agency, and its Governance Group in setting future direction, and may support future investment decisions.

Background and context

The NPMP commenced on 2 August 2022 following years of fragmented management of kauri dieback that was the focus of a 2019 Parliamentary Select Committee review¹.

The Plan's objectives include addressing the adverse effects of PA and the loss of kauri² in order to:

- reduce the spread of PA, and
- maintain areas free of PA, and
- reduce the impact of PA within infected sites, and
- locally eliminate PA within infected sites, and
- protect kauri with special value from PA, and
- facilitate controlled access to kauri forests where it does not compromise the future or protection of kauri.

The plan established Tiakina Kauri as a dedicated management agency under the Biosecurity Act 1993, embedding Treaty partnership principles and enforceable rules to protect kauri forests. The programme builds on substantial science investments that concluded in March 2024. It was backed by funding of \$32 million over five years allocated in Budget 2021, which is scheduled to end on 30 June 2026 (noting funding for the management agency itself is permanently baselined).

Managing PA is an intergenerational task—kauri's lifespan spans centuries and millennia, while the pathogen's persistence and delayed symptoms require decades of sustained effort.

Methodology and scope

This review draws on programme documentation, operational examples (including site visits), and interviews with iwi leaders, scientists, government managers, and stakeholders. Analysis was structured around five key questions:

1. Progress toward NPMP objectives and goals
2. Improvements needed in delivery
3. Changes in programme "health" (focus, relationships, collaboration) since NPMP establishment
4. Whether NPMP investment remains sound and where future investment should focus
5. Whether MPI remains the best option for housing Tiakina Kauri and any viable alternatives

Progress was assessed against the NPMP's achievement measures (Section 10). Findings integrate stakeholder feedback and expert assessment. Out of scope are NPMP regulations, management agency structure, and Governance Group structure.

¹Briefing on kauri dieback - Report of the Environment Committee (June 2019) https://www3.parliament.nz/resource/en-NZ/SCR_89461/c136b829494a141651ed0e5aa016d56db8c1cf26

²This includes adverse effects on the relationship between Māori, their culture and traditions, and their ancestral lands, waters, sites, wāhi tapu, and taonga, on the environment, on enjoyment of the natural environment and on economic well-being.

Findings

The introduction of the NPMP and Tiakina Kauri has transformed a previously fragmented system into one with clear governance, mandate, and focus. Since then, the programme has delivered substantial progress in strengthening kauri protection and the cultural, ecological, social, and economic benefits that flow from it. Public awareness has increased through national campaigns and community initiatives, while significant advances have been made in mapping kauri and PA distribution and implementing key containment measures such as track upgrades, cleaning stations, fencing, and wild animal control.

A strong emphasis on practical collaboration and locally led approaches has supported iwi driven and other community initiatives, resulting in more coordinated and effective action at place. Since 2019, relationships, trust, and coordination among agencies, mana whenua, and stakeholders have improved noticeably, helping build a shared sense of direction and enabling more effective joint planning and delivery. Programmes such as Kauri Ora and other iwi-led initiatives demonstrate a proactive, community anchored approach that contrasts with the fragmentation and tension experienced in earlier years. Regular regional hui have further supported alignment, transparency, and information sharing, although levels of engagement still vary across some partners.

One of the most significant achievements has been the growth of mana whenua capability and iwi-led delivery. Crown investment has catalysed this transformation, enabling iwi to build skilled teams, develop strategic plans and lead place-based interventions. These efforts have unlocked innovation, leveraged co-investment, and demonstrated the potential of iwi leadership to deliver enduring outcomes for kauri and communities. Sustaining this progress is now critical: funding uncertainty threatens hard-won capability and risks losing skilled personnel. Continued investment and partnership are essential to maintain momentum and secure intergenerational stewardship of kauri forests.

There have been significant operational achievements in areas such as raising public awareness through national campaigns and locally driven initiatives, mapping the distribution of PA and kauri across forests and stands, and infrastructure upgrades (surveillance), and upgrades to critical infrastructure (cleaning stations, track improvements, fencing).

The next phase of the programme requires a sharper focus on integrated planning and reporting, along with strengthening of operational disciplines. Current frameworks do not present a complete, system-wide picture of all activities contributing to NPMP objectives. This limits transparency and strategic oversight. A shift is needed to strategic planning that is more integrated - across all partners and regardless of funding source - at a landscape-scale, then translated into locally-relevant place-based plans.

Similarly, the programme needs to establish clear completion targets, apply consistent performance metrics (across all partners and regardless of funding source), and adopt an integrated reporting framework that reflects all partner contributions. At the same time, the programme needs to strengthen operational disciplines to ensure delivery is efficient, accountable, and adaptive. These improvements will reinforce trust, enable better prioritisation, and ensure NZ-Inc investment delivers maximum impact.

Achieving this requires more than technical fixes. It will depend on genuine, willing participation from all kaitiaki and forest managers. This includes DOC, regional councils, mana whenua, and community organisations, as well as Tiakina Kauri's leadership in convening partners to agree on common standards and to coordinate planning, data collection, and reporting.

Adaptive management³ is essential to sustaining kauri protection and must be strengthened. The programme's success depends on using monitoring data to refine strategies, respond to emerging risks, and scale proven tools (e.g., Phosphite). Achieving this requires weaving together the best of scientific research and mātauranga into a unified delivery model, ensuring decisions are both evidence-based and culturally grounded. This will require strengthening collaboration between research and operational teams, as evidenced in pockets of the current programme, such as the Te Roroa programme at Waipoua Forest.

³Adaptive management in the context of the PA programme means a continuous, evidence-driven cycle of learning and improving how kauri are protected, based on what monitoring and mātauranga/science tell us is actually happening on the ground.

Several regulatory and compliance gaps need to be addressed. Underutilised tools such as Kauri Protection Areas and Earthworks Risk Management Plans represent missed opportunities, while compliance remains the programme’s weakest link. Steps to establish a nationally consistent, risk-based compliance framework—supported by authorised personnel, training, and adequate resourcing—need to be accelerated. This will require leadership from Tiakina Kauri and working through the roles, responsibilities and any support needed by mana whenua, councils and DOC.

Continuing to invest in NPMP implementation represents a high-impact, cost-effective choice. Protecting kauri safeguards an iconic taonga central to Māori identity and New Zealand’s heritage, delivering enduring cultural, ecological, and economic benefits while preventing irreversible loss. The programme is highly feasible and strongly positioned for success. PA affects a single host species, its vectors are controllable, and proven tools such as hygiene measures, track upgrades, and phosphite treatment can be scaled.

Funding uncertainty now poses the most immediate risk to continuity and capability. Without clarity, iwi and operational partners cannot retain skilled staff or plan long-term projects, jeopardising hard-won progress. Multi-year funding aligned to the NPMP term is essential to maintain momentum, leverage co-investment, and avoid reverting to fragmented, reactive approaches. A sustainable funding model is needed – likely a blended model - and the range of potential options to be explored is summarised in this report (refer to Finding 17).

The full value of kauri protection—and its wider benefits for tourism, regional economic development, biodiversity, climate resilience, and national wellbeing—is not well understood. Stronger measurement and more compelling communication are needed to demonstrate impact and bring benefits to life through data and stories of local success.

MPI remains the most practical option for housing Tiakina Kauri during the current NPMP term, offering statutory powers, national coverage, and essential technical and compliance support. Practical and reasonable opportunities to strengthen Tiakina Kauri’s regional presence and improve mutual connection should be explored.

Building consensus on a sustainable, long-term programme is critical. Partners must work together to shape a shared vision and explore enduring funding solutions—such as multi-year commitments and co-investment—to maintain momentum and protect kauri for future generations. As future strategy and funding models are developed, alternative programme leadership models for the longer term should be considered.

Recommendations are presented in Section 2, and a summary of findings—with explanatory detail provided throughout the report—is included in Appendix 1.



Purpose

The purpose of this review is to document progress against the Plan and inform future activities. The review is intended to support the decisions and actions of Tiakina Kauri, the management agency for the Plan, and will inform its Governance Group in setting future direction. This review is not intended to be a statutory review, as set out in Section 100D of the Biosecurity Act 1993. It is considered timely, as Tiakina Kauri is in the final year of funding appropriated for the programme in Budget 2021 (noting that funding for the management agency itself is permanently baselined), and may support future investment decisions.

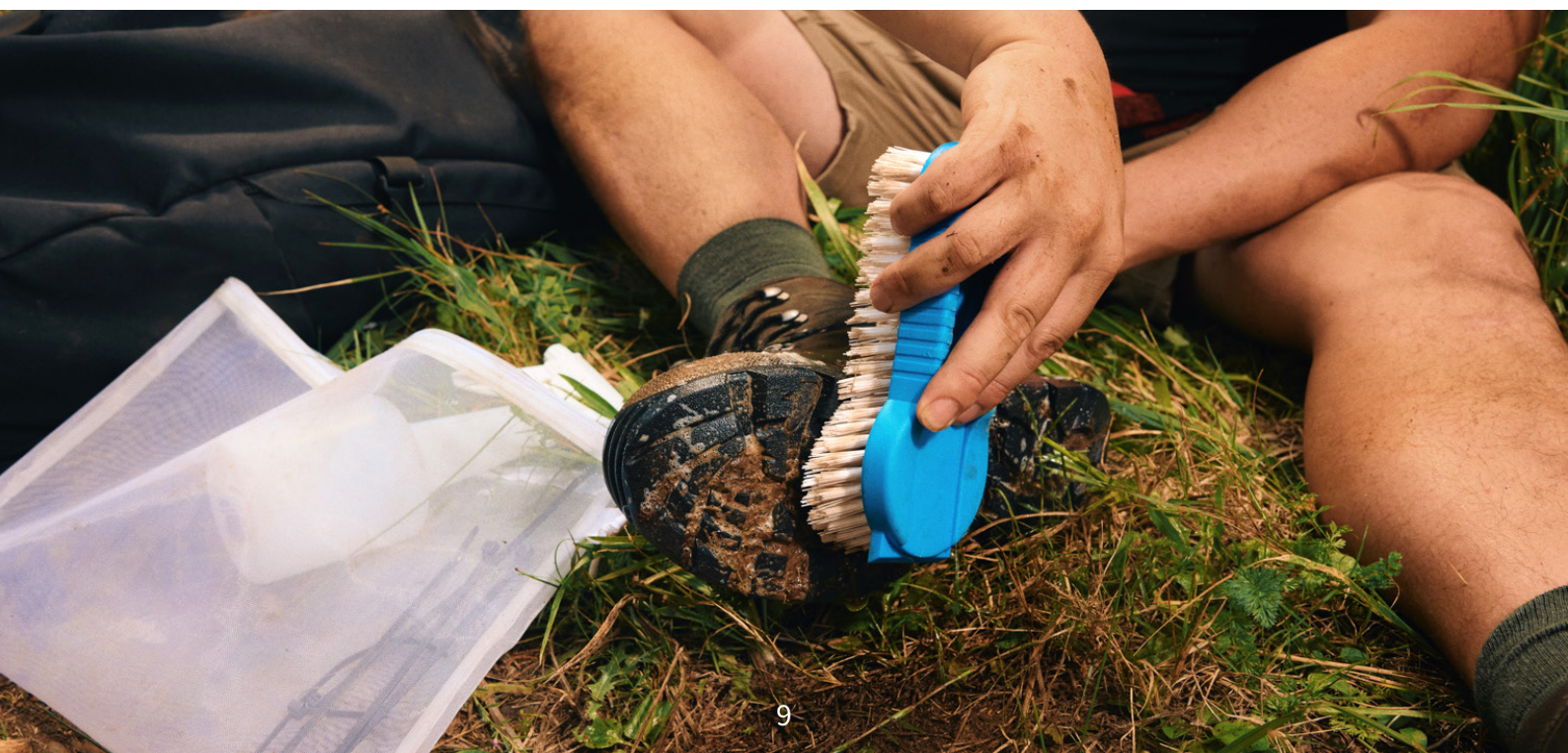
Recommendations

The review recommendations are set out below in priority order, along with who is best placed to respond to them and suggested timeframe and rationale (“immediate” = 0-3 months, “near-term” = 3-6 months, “short-term” = 6-12 months, “medium-term” = 12-24 months).

Recommendation	Responsibility (lead is highlighted)	Timeframe
1. Resolve current funding uncertainty as a matter of urgency, including multi-year Crown funding and near-term co-funding opportunities that programme partners can actively pursue.	MPI , DOC, councils, mana whenua and other partners with ability to secure near-term co-funding	Immediate
2. Sustain and strengthen mana whenua capability and iwi leadership as a core pillar of kauri protection —building on proven success and leveraging in-kind contributions and significant innovation.	Tiakina Kauri , mana whenua, DOC, councils	Near-term (and ongoing)
3. Expand NPMP progress reporting so it provides a system-wide view that encompasses all kauri lands and activities that contribute to achieving NPMP objectives - this will require willing participation and coordination across Tiakina Kauri, DOC, councils, mana whenua and key community organisations.	Tiakina Kauri , DOC, councils, mana whenua, significant community groups (e.g., Kauri Rescue)	Near-term
4. Close the relationship gap between operational and research agencies —leveraging the opportunity associated with the recent formation of the Bioeconomy Science Institute.	Tiakina Kauri & Bioeconomy Science Institute , working with DOC, councils and mana whenua	Near-term
5. Mandate and embed a formal adaptive management framework for implementing the PA NPMP, ensuring the integrated use of mātauranga Māori indicators alongside scientific monitoring to guide evidence based decision making.	Tiakina Kauri , working with Bioeconomy Science Institute, DOC, councils and mana whenua	Short-term

Recommendation	Responsibility (lead is highlighted)	Timeframe
6. Establish a jointly agreed long-term strategic direction that sets out the future vision, governance, delivery system, research and mātauranga priorities, and enduring funding needed to sustain kauri protection for the remainder of the current NPMP term and beyond.	Tiakina Kauri , mana whenua and other partners	Medium-term
7. Implement coordinated landscape-scale planning across all kauri lands to better align the programmes and activities that contribute to achieving the NPMP objectives – this will require willing participation and coordination across Tiakina Kauri, DOC, councils, mana whenua and key community organisations.	Tiakina Kauri , DOC, councils, mana whenua	Short-term
8. Develop an action plan for scaling the application of proven and underutilised tools, such as phosphite treatment (within the adaptive management framework referred to within recommendation 6).	Tiakina Kauri and Bioeconomy Science Institute , DOC, councils, mana whenua, Kauri Rescue	Short-term
9. Establish clear completion targets ('finish lines') and progress metrics within place-based plans (e.g., Kauri Ora Plans) for key interventions—such as cleaning station installation, track upgrades, fencing, and wild animal control and surveillance— that are aligned nationally and locally to give a clearer view of progress.	Tiakina Kauri , working with Bioeconomy Science Institute, DOC, councils and mana whenua	Short-term
10. Refresh economic assessments to demonstrate avoided loss and national benefits, providing stronger evidence for investment.	Tiakina Kauri , mana whenua and local communities	Short-term
11. Co-create place based success stories to highlight cultural, ecological, and economic gains and strengthen public and political support for kauri protection.	Mana whenua and local communities , Tiakina Kauri	Near-term (and ongoing)
12. Continue to invest in PA Surveillance Strategy implementation, including focus on addressing baseline data gaps, ensuring data is clean and standardised, and leveraging this information to strengthen risk mapping, operational planning, and trend analysis of forest health in response to management interventions.	Tiakina Kauri	Near-term (and ongoing)
13. Continue to invest in successful national behaviour change campaigns that maintain broad public awareness, while prioritising and supporting targeted engagement strategies for high-risk forest users, such as hunters, delivered by those with the strongest local credibility and reach.	Tiakina Kauri , with delivery by those with the strongest local credibility and reach (e.g., mana whenua, councils)	Near-term (and ongoing)

Recommendation	Responsibility (lead is highlighted)	Timeframe
14. Proactively assess opportunities to introduce the use of Kauri Protection Areas for better protecting sites of exceptional ecological and cultural significance.	Tiakina Kauri , regional councils, DOC, mana whenua	Medium-term
15. Strengthen the planning and enforcement of earthworks risk management for PA by: <ul style="list-style-type: none"> working proactively with territorial authorities to embed PA-specific provisions into local planning and consenting processes (including as new planning and built environment legislation is introduced), ensuring consistent implementation across all regions—closing current gaps in Northland, Waikato and Bay of Plenty, improving communication with territorial authorities and reporting in relation to earthworks risk management for PA, and strengthening education (targeting the groups most likely to undertake earthworks that could spread PA) and providing clear guidance to ensure requirements are well understood and applied. 	Regional Councils , Tiakina Kauri, working with TAs and supported by Auckland Council (sharing experience) and mana whenua	Medium-term
16. Continue to house Tiakina Kauri within MPI.	Biosecurity New Zealand	For the foreseeable future
17. Engage in constructive dialogue to align expectations and agree any practical opportunities to strengthen regional presence and improve mutual connection with Tiakina Kauri.	Biosecurity New Zealand , mana whenua , local communities, DOC, councils	Medium-term



Background and context

This review considers progress following commencement of the National PA Pest Management Plan⁴ (NPMP) on 2 August 2022. This represents, more or less, the first three years of NPMP implementation. While this review does not cover the period prior to this, progress after the NPMP commenced must be considered in light of the programme history; in particular, the public concerns that led to the NPMP being established and trust building required as Tiakina Kauri – the management agency for the NPMP – was formed.

The threat posed by PA was first recognised in the **mid-2000s** when unexplained kauri mortality was observed in Northland and Auckland forests. Early responses were largely regional and ad hoc, led by DOC, regional councils, and mana whenua, with limited national coordination or dedicated funding.

In **2009**, the multi-agency Kauri Dieback Programme formed (MPI, DOC, regional councils, iwi representatives) to coordinate hygiene measures, awareness, surveillance, and research. Despite progress, governance and delivery were later described as fragmented and inconsistent, and funding was often short-term relative to the scale of the challenge⁵.

Between **2013 and 2019**, the MBIE-funded Healthy Trees, Healthy Future science programme advanced understanding of PA biology, host resistance, and treatments (including phosphite), and established a kauri germplasm archive and identified trees with potential resistance to PA⁶.

By **2018**, growing concern that insufficient action was being taken to halt the spread of PA led to a Parliamentary Select Committee review⁷, which recommended stronger national leadership, establishing a National Pest Management Plan (NPMP) under the Biosecurity Act 1993, and a more integrated approach—particularly embedding Treaty partnership and aligning research with operations.

Responding to these findings and direction from Ministers, MPI led development of a draft NPMP proposal, undertook several rounds of consultation in relation to this during 2018 and early 2019, and submitted a formal proposal⁸ to the Minister for Biosecurity in 2019. Consultation involved iwi, councils, scientists, and community stakeholders, with strong support for a plan that embedded Treaty partnership principles.

In **December 2018**, the Strategic Science Advisory Group for the programme released a science plan designed to help align kauri dieback research efforts and to prioritise the science needed to better understand the disease and stop its spread.

In **2019**, the Government invested \$34.5 million through MBIE's Strategic Science Investment Fund platform for research into kauri dieback and myrtle rust, hosted by the Biological Heritage National Science Challenge. This funding supported tool development, pathogen biology studies, and integration of mātauranga Māori into solutions, and this investment was the subject of a separate review in 2023⁹.

In **2021**, the Government allocated \$32 million over five years to implement the NPMP under the Biosecurity Act 1993¹⁰. The NPMP came into effect on **2 August 2022**, establishing Tiakina Kauri as the dedicated management agency within Biosecurity New Zealand, a business unit of MPI, and introducing ten enforceable rules covering hygiene, movement of soil and plant material, earthworks, stock exclusion, and reporting obligations.

⁴The NPMP refers to the Biosecurity (National PA Pest Management Plan) Order 2022

⁵New Zealand Parliament. (2019). Inquiry into the Spread of Kauri Dieback Disease. Primary Production Committee Report.

⁶<https://scion.contentdm.oclc.org/digital/api/collection/p20044coll19/id/1/download>

⁷New Zealand Parliament. (2019). Inquiry into the Spread of Kauri Dieback Disease. Primary Production Committee Report. Retrieved from https://www.parliament.nz/resource/en-NZ/SCR_88743/8f6b4b7b8e3b4f7e9b8e4e6e8e8e8e8e

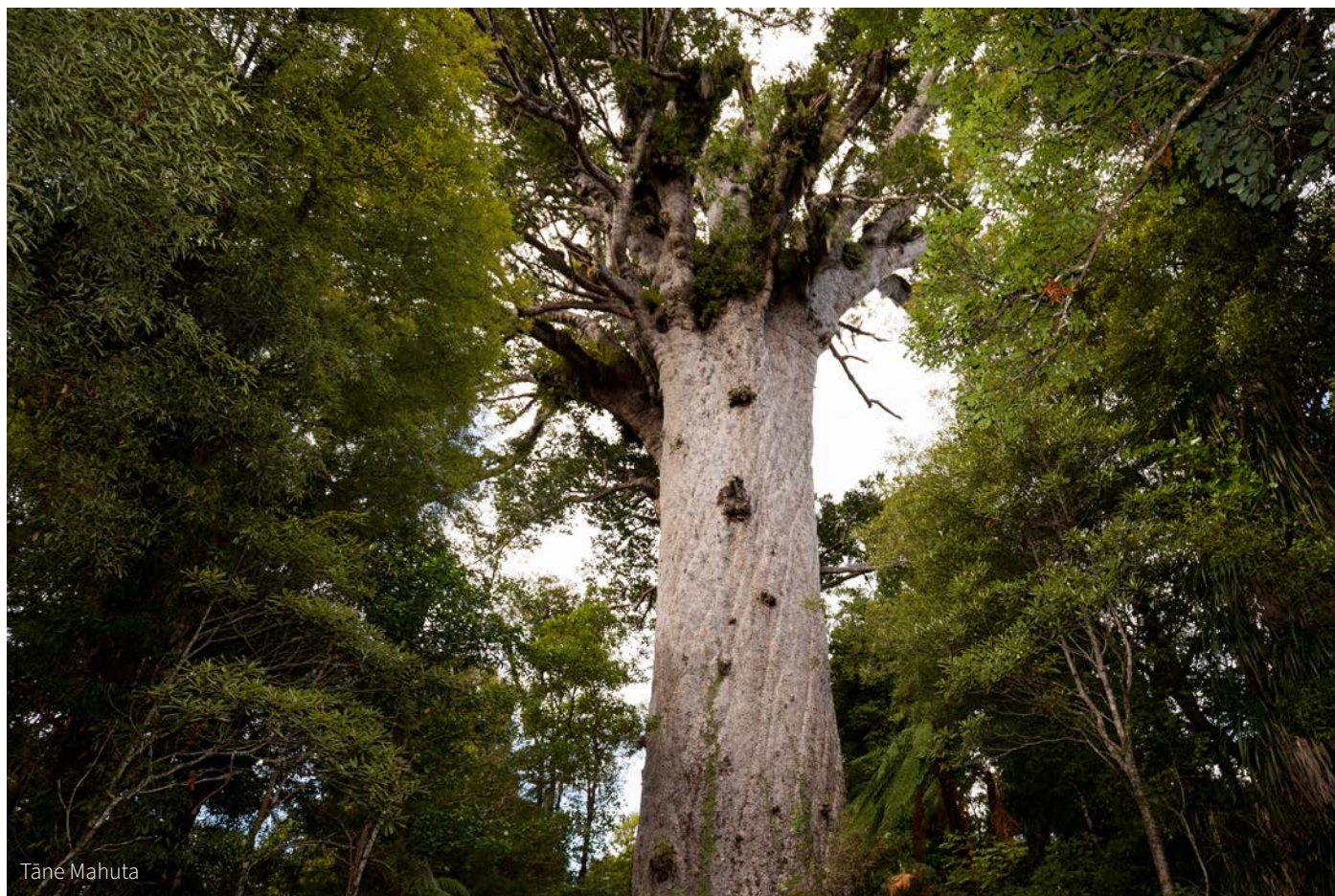
⁸National (Phytophthora agathidicida) Pest Management Plan proposal - Proposal to meet requirements of Section 61 of the Biosecurity Act

⁹MBIE Contract Review Report: *Ngā Rākau Taketake Platform Strategic Science Investment Fund Programmes, September 2023*

¹⁰Biosecurity Act 1993 No 95 (as at 05 April 2025), Public Act Contents – New Zealand Legislation

Over the **past decade**, public access to kauri forests has been restricted, in some places, to combat the spread of PA. Starting around 2017–2018, large-scale closures were implemented in high-risk areas such as the Waitākere Ranges and Waipoua Forest, with rāhui and Controlled Area Notices requiring strict hygiene measures. Many tracks were shut for years while extensive upgrades—including boardwalks, drainage systems, and cleaning stations—were installed to meet “dry-foot” standards. A phased reopening of some tracks has coincided with the introduction of the NPMP, with tracks such as Cascade Falls and Zig Zag in Waitākere, and the Tāne Mahuta walk in Waipoua, reopening after major infrastructure improvements. Today, some closures and access restrictions remain, reflecting a difficult balancing act between ensuring safe access and protecting kauri ecosystems for the long term.

Another important piece of context for this review and for considering “progress” is the long-term nature of disease management for this issue, given the extraordinary biology of both the host (kauri) and the pathogen (PA). Kauri trees (*Agathis australis*) can live for more than a millennium, with iconic specimens such as Tāne Mahuta estimated to be 1,250–2,500 years old (Steward & Beveridge, 2010¹¹). The pathogen’s complex lifecycle means that above-ground symptoms often emerge only after several years (also known as the ‘latency period’ - the time it takes a tree to first show visible disease symptoms after infection), which complicates early detection (Weir et al., 2015¹²; Bellgard et al., 2016¹³). Moreover, once a tree succumbs, the pathogen’s survival structures (especially oospores) persist in the soil, posing a long-term risk (Bellgard et al., 2016). Effective management must go beyond short-term containment and plan for decades or even centuries, combining ongoing surveillance, soil hygiene, pathway control, and site rehabilitation to safeguard forests whose recovery may only be evident to future generations (Weir et al., 2015; Bellgard et al., 2016).



Tāne Mahuta

¹¹Steward, G. A., & Beveridge, A. E. (2010). *A review of kauri (Agathis australis) ecology: History, distribution, and environmental influences*. New Zealand Journal of Ecology, 34(1), 1–18.

¹²Weir, B. S., Paderes, E. P., Anand, N., & Bellgard, S. E. (2015). *Phytophthora agathidicida* sp. nov., associated with kauri dieback disease in New Zealand. Mycological Progress, 14(4), 1–8. <https://doi.org/10.1007/s11557-015-1044-7>

¹³Bellgard, S. E., Weir, B. S., Pennycook, S. R., & Paderes, E. P. (2016). *Phytophthora agathidicida: A new species causing kauri dieback disease in New Zealand*. Australasian Plant Pathology, 45(5), 413–425. <https://doi.org/10.1007/s13313-016-0433-3>

Methodology and scope

The review draws on interviews conducted with iwi leaders and staff, scientists, central and regional government managers and staff, and stakeholders (see Appendix 2) and documents provided to the reviewer (see Appendix 3). Evidence was considered across interviews, programme documentation, and operational examples (including site visits).

The analysis is structured around the following five review questions:

1. What progress has been made towards achieving the objectives and goals of the NPMP?
2. What improvements could be made to delivery of the objectives?
3. Has the general “health” (e.g., focus, relationships, collaboration) of the management of PA improved following the establishment of the NPMP?
4. Does investment in NPMP implementation remain a sound investment? If future funding initiatives arise, in what areas is additional investment likely to make the biggest difference?
5. Does MPI remain the best option for housing the Tiakina Kauri management agency? What, if any, viable alternatives warrant consideration?

Progress under Question 1 was assessed in relation to the ‘Means of measuring achievement of Plan’s objectives’ set out in section 10 of the NPMP (see below).

Findings are integrated from stakeholder feedback and the reviewer’s expert assessment. Limitations include the absence of a complete national dataset covering all agencies’ investments and the time-bound nature of interviews.

The following matters are out of scope of the review:

- i. NPMP regulations / Order in Council
- ii. Structure of the management agency
- iii. Structure of the Tiakina Kauri Governance Group.



Findings

5.1 What progress has been made towards achieving the objectives of the NPMP?

Table 1 sets out the NPMP objectives and the means of measuring progress toward their achievement.

Table 1: NPMP objectives and the means of measuring progress toward their achievement (with reference to the relevant section of the Biosecurity Act 1993).

General objectives (section 6)	Objectives addressing adverse effects (section 7)	Intermediate outcomes (section 8)	Means of measuring achievement of Plan's objectives (section 10)
<p>The objectives of the Plan are to—</p> <ul style="list-style-type: none"> • reduce the spread of PA; and • maintain areas free of PA; and • reduce the impact of PA within infected sites; and • locally eliminate PA within infected sites; and • protect kauri with special value from PA; and • facilitate controlled access to kauri forests where it does not compromise the future or protection of kauri. 	<p>Addressing adverse effects of PA and the loss of kauri that the Plan addresses on—</p> <ul style="list-style-type: none"> • the relationship between Māori, their culture and traditions, and their ancestral lands, waters, sites, wāhi tapu, and taonga; and • the environment caused by 1 or more of the following: loss of endemic species; changes in plant community structure; increased soil erosion; changes in hydrology; and enjoyment of the natural environment caused by restrictions imposed on recreational activities in kauri forests to minimise further degradation of the forests from the effects of PA; and • economic well-being caused by rising emissions of greenhouse gases from the depletion of the stored carbon in kauri when they die. 	<p>The intermediate outcomes for the Plan are—</p> <ul style="list-style-type: none"> • sustained control of PA to reduce its impacts on infected kauri and its spread to other kauri in New Zealand; and • exclusion of PA that is present in New Zealand from areas where PA is not yet established; and • containment within, or reduction of the geographic spread of PA from, an area over time. 	<p>The means of measuring the achievement of the Plan's objectives are—</p> <ol style="list-style-type: none"> a. the management agency's level of understanding of the distribution of PA across kauri lands and kauri forests; b. the level of resilience of kauri forests in response to PA; c. the level of public and industry engagement in the management of PA; d. the management agency's available access to capability, knowledge, and tools to support effective management of PA; e. the number of physical PA spread mitigations; f. the level of compliance with the requirements of the Plan.

For the purpose of this report, progress is considered primarily in relation to the ‘means of measuring achievement of the Plan’s objectives’

Table 2 sets out key metrics for progress in relation to the means of measurement for activities funded by Tiakina Kauri only – this reflects the current scope of Tiakina Kauri planning and reporting - and includes specific comments in relation to each means. Overall comments and consideration of wider progress for activities funded by other partners are discussed subsequently.

Table 2. Key metrics for progress in relation to the means of measurement (for activities funded by Tiakina Kauri only¹⁴)

Means of measurement (s.10)	Key progress metrics	Comments
<p>(a) the management agency’s level of understanding of the distribution of PA across kauri lands and kauri forests:</p>	<ul style="list-style-type: none"> • 100% of kauri stands and forests are mapped • 92% of crown-emergent kauri trees have been mapped • 227,165 ha of aerial surveillance • 16 active areas of interest identified as part of a surveillance plan (in Kete Aronui) • 14 forests have active ground surveillance programmes • 8 forests have statistically designed surveillance programmes (representing 37% of major Kauri stands and 23% of Kauri forests) • 26% of kauri forests have risk maps, prioritising key forests • 1757 soil samples taken 	<p>This represents substantial progress toward establishing a robust baseline understanding of the distribution of kauri forests, stands, and PA, marking an important milestone for the programme. The surveillance effort is underpinned by a well developed, science based surveillance strategy¹⁵.</p> <p>As well as increased surveillance activity in kauri forest stands and forests, this includes improvement in management of surveillance information with introduction of Kete Aronui (Tiakina Kauri’s GIS portal, hosted by LINZ) and with work well underway to improve the quality and usability of data (e.g., to clean and standardize surveillance data, remove duplicate records, and prepare data so it is more easily analysed and integrated for effective decision-making and reporting).</p> <p>Notably, this remains an incomplete baseline; it is essentially presence/absence data and does not represent systematic monitoring of all kauri stands. There are specific gaps regarding some remote areas and private land.</p> <p>Some data held by landowners and/or mana whenua is not made available to the management agency due to data sovereignty considerations.</p>

¹⁴The following data are sourced from Tiakina Kauri annual reports (2021-2023, 2023/24 and 2024/25) and various reports to the Tiakina Kauri Governance Group.

¹⁵Tiakina Kauri Surveillance and Monitoring Strategy for Kauri Protection. Updated October 2024.

Means of measurement (s.10)	Key progress metrics	Comments
(b) the level of resilience of kauri forests in response to PA:	<ul style="list-style-type: none"> • 2250 tree health surveys conducted • 1,297 trees treated with phosphite • Baseline health monitoring initiated (see above) 	It is challenging to measure kauri forest resilience to PA at this time, because kauri live for centuries, symptoms take years to appear, and there is a paucity of long-term or comprehensive monitoring information.
(c) the level of public and industry engagement in the management of PA:	<ul style="list-style-type: none"> • 90% of people think it is important to protect kauri • 79% of people believe we all have a role to play in making sure that the PA pathogen does not spread • 1.8 million people reached by ‘GIVE KAURI SPACE TO GROW’ campaign • 14.5 million digital advertising impressions and at least 709,323 people and businesses reached by the new ‘MAKE KAURI PROTECTION SECOND NATURE’ campaign • 57,888 views of Tiakina Kauri website • 93 workshops, sessions or field trips run at schools, holiday programmes, universities and kura 	The two major national public campaigns, supported by local communications and engagement initiatives have been well designed and well executed.
(d) the management agency’s available access to capability, knowledge, and tools to support effective management of PA:	<ul style="list-style-type: none"> • Builds on at least \$34.5m in research investment through MBIE, targeting access to pathogen detection tools, chemical treatments (e.g., phosphite, Zorvec), epidemiology and risk models, genomic and biological studies (e.g., understanding kauri susceptibility), best practice and management guidelines, and community engagement and mātauranga Māori knowledge • 8 projects in progress and completed, in line with the science plan • 113 mātauranga Māori wānanga, hui and events hosted • 36 scientific talks presented at wānanga, hui and events • 28 Kauri Ora plans in place • 115 individuals accredited in hygiene practices • 78 individuals certified in relevant capabilities (e.g., ground surveillance, GIS, etc.) 	<p>The PA programme is built on a sound scientific foundation, drawing on a substantial body of research in plant pathology, forest ecology, and biosecurity. It integrates evidence-based tools such as molecular diagnostics for early detection, epidemiological models to predict disease spread, and effective treatments.</p> <p>The development of key tools, such as phosphite treatment, now allows targeted injections to slow disease and improve kauri health, alongside hygiene measures and site management. Combined with mātauranga Māori principles such as kaitiakitanga and tikanga, these approaches support culturally informed decision-making and long-term forest protection.</p>

Means of measurement (s.10)	Key progress metrics	Comments
(e) the number of physical PA spread mitigations:	<ul style="list-style-type: none"> • 3,522 wild animals controlled • 35 hygiene stations installed • 63.3 km of fencing installed to exclude stock • 24.1 km tracks upgraded and access controls implemented in sensitive areas 	While it is not possible to estimate the number of physical spread mitigations, the programme has implemented key measures that address key vectors and reduce the risk of PA spread. This includes control of wild animal vectors, stock exclusion, track upgrades, hygiene stations and access controls.
(f) the level of compliance with the requirements of the Plan.	<ul style="list-style-type: none"> • 31% of people know about the NPMP or NPMP rules • 9 plant producers growing kauri certified under Plant Pass (Kauri Schedule) • 1 PA Risk Management Plan approved • 12 Earthworks Risk Management Plans approved 	There appears to be limited overall awareness of the NPMP rules, and there appears to have been limited focus on compliance with the Plan rules to date. This is a critical gap in the programme that Tiakina Kauri is taking some steps to address. There is very limited evidence of the management of risk associated with earthworks.

Overall, it is clear the NPMP and Tiakina Kauri have resulted in greater focus and improved coordination, with demonstrable commitment to embedding Treaty partnership principles and empowering local communities to build capability and take action at place – refer to [Findings 1 and 2](#).

Public awareness has been significantly raised through national awareness campaigns and locally driven initiatives; however, there has been limited focus on other aspects of compliance, and this is a critical gap at this time – refer to [Findings 3 and 10](#).

Strong progress has been made in areas of surveillance and reducing spread through controls on key vectors (e.g., cleaning stations, wild animal control, fencing etc.) – refer to [Findings 4 and 5](#).

To date, Tiakina Kauri has reported only on activities it funds, which constitute a subset of the overall expenditure and activities that contribute to achieving the NPMP objectives. National planning and annual progress reporting are needed that present a system-wide picture and landscape-scale planning view – refer to [Findings 6 and 7](#).

Finding 1: Introduction of the NPMP and Tiakina Kauri has significantly strengthened programme structure, sharpened focus, and improved coordination, while providing a clear mandate and support for locally led initiatives.

The introduction of the NPMP and the establishment of Tiakina Kauri have marked a significant step forward for the programme. Before these changes, stakeholders described the system as “*fragmented*”, with unclear governance, groups operating in silos and insufficient protection for kauri.¹⁶ The NPMP has established a national framework and reference point for decision-making, giving the programme greater structure and mandate.

Interviewees highlighted the value of having a dedicated entity - Tiakina Kauri - focused solely on kauri. This contrasted with earlier arrangements, in which kauri competed for attention with numerous other issues and programme structure and focus were weaker. The partnership approach embedded in Tiakina Kauri’s design—recognising mana whenua as kaitiaki and kauri as taonga—was repeatedly cited as a positive step in building trust and enabling iwi-led solutions.

Importantly, the NPMP and Tiakina Kauri have provided mandate and practical support for locally led initiatives. Iwi and hapū partners described how the regulatory framework gave them confidence to act decisively, while Tiakina Kauri’s funding and technical assistance created a runway for building teams and establishing local programmes. One iwi leader noted that even modest funding “was enough to do something that mattered,” enabling them to grow from two staff to a team of 16 (leveraging funding from alternate sources) and develop long-term strategies.

Finding 2: The programme is strengthening its collaborative approach by supporting locally led action, building capability on the ground, and ensuring national coordination enables practical delivery at place.

Tiakina Kauri has prioritised an approach that combines national leadership with locally driven implementation. This has included investing in capability, building relationships with communities, and supporting locally relevant solutions. While this approach has taken time to mature, especially in the early stages, many participants described the trajectory as strongly positive, noting steady improvements in confidence, clarity of roles, and coordination.

Stakeholders consistently emphasised that collaboration and shared problem solving are essential for the programme’s long-term success. The operating model has evolved from a primarily centralised approach to one that recognises the value of local knowledge, cultural context, and community leadership. This shift has enabled iwi, hapū, and local groups to contribute actively to kauri protection and wider forest health outcomes.

By valuing both science and local expertise—including mātauranga Māori—the programme is developing a more comprehensive and enduring approach, fostering local ownership and strengthening long term capability for protecting kauri ecosystems.

Tiakina Kauri has placed significant emphasis on embedding Treaty partnership and an operating model that entails national coordination and local implementation, including growing local capability and relationships at place. This has not been without its challenges.

Several participants described the early stages as “bumpy and hard at times” and acknowledged that there has been a learning phase in which the programme is “finding its feet” and confidence is building.

¹⁶Briefing on kauri dieback. Report of the Environment Committee. June 2019

The overall trajectory is viewed as very positive, with progress being made, growing capability and stronger relationships at place.

Throughout the review, partners and stakeholders consistently highlighted the importance of partnership and collaboration for the programme's long-term success. The approach has shifted from a more top-down model to one that values local leadership, cultural context, and shared decision-making. This has enabled some iwi, hapū, and community groups to actively contribute to kauri protection and broader forest health initiatives. This has included acknowledging kaitiakitanga and valuing mātauranga Māori alongside science, thereby creating a more holistic approach, local ownership, and greater potential for an enduring strategy.

Finding 3: Public awareness has risen significantly through national campaigns and locally driven initiatives. To sustain impact, these need to continue and be complemented by more targeted engagement with high-risk forest users (e.g., hunters).

National campaigns led by Tiakina Kauri, combined with iwi-led and community initiatives, have successfully and cost-effectively elevated the profile of the issue. Stakeholders noted that messaging is now far more visible than in the early years, with consistent branding and practical advice on cleaning gear and sticking to tracks. This has helped normalise hygiene practices for many forest users and created a stronger sense of shared responsibility.

Interviews highlighted that awareness alone does not guarantee behaviour change or compliance, especially among high-risk groups. Hunters were repeatedly identified as a priority because they often go off-track and can spread contaminated soil. Several partners felt current campaigns are too broad and do not target these behaviours effectively. While mana whenua and local teams have sought to engage with hunters and recreational users, these efforts have been inconsistent and under-resourced. There is an opportunity to build on general public campaigns by creating tailored strategies for those posing the greatest risk. Stakeholders stressed the need to maintain momentum. Public interest fades quickly, and hygiene practices can slip without reinforcement.



Example of 'Make Kauri protection second nature' campaign - farmer audience.

Finding 4: Significant progress has been made in mapping the distribution of PA and kauri across forests and stands. However, gaps remain—some forests still require robust baseline data to confirm disease status. There is also an opportunity to translate existing data into actionable management insights and build long-term trend monitoring.

The programme has achieved notable advances in surveillance and mapping and is well served and directed by a robust surveillance strategy¹⁷ based on sound science and mātauranga.

Stakeholders consistently acknowledged the value of recent surveys, which have provided clearer visibility of where PA is present and the extent of kauri distribution. These efforts have strengthened risk assessment and informed local interventions.

The baseline is not yet complete. Some forests, particularly in less accessible regions and on private land, still lack robust data to confirm disease status. Plugging such gaps requires further investment. Interview feedback highlighted both progress and some frustration. Some iwi and council partners praised the technical improvements in survey design, tools and data capture, while others pointed to uneven coverage and delays in translating data into practical tools. For example, while large datasets now exist, stakeholders observed that these are not always converted into information and insights that inform operational planning.

It is evident that work is well underway to improve the quality and usability of data (i.e. Karyn Froud’s work to clean and standardise surveillance data, remove duplicate records, prepare data so it is more easily analysed and integrated for effective decision-making and reporting etc.). There is a collective intent to utilise that improved data more effectively to strengthen risk mapping and operational planning. This is a significant milestone and a pivotal point in the programme.

There is a clear need for long-term trend monitoring – underpinned by sound science and mātauranga - to understand disease progression and overall forest health, rather than relying on isolated snapshots. Continuous monitoring will be critical for assessing whether the programme is on track to achieve the NPMP objectives, and this will require sustained investment over decades.

There are limited pockets of early long-term monitoring data (“early” relative to the extended timeframe required to manage diseases such as PA) for certain forests and stands, including the Waitākere Ranges and Waipoua Forest. Expanding this monitoring and securing additional investment is essential.

Data sovereignty emerged as a consistent theme during interviews. It became evident that some land managers and mana whenua are cautious and, at times, reluctant to share information with the management agency. Whatever the underlying cause, addressing this issue is critical to enable appropriate sharing and protection of information, ensuring that both the management agency and land managers, including mana whenua, have the knowledge needed to make the best decisions for kauri.

¹⁷Tiaki Kauri Surveillance and Monitoring Strategy for Kauri Protection. Updated October 2024.

Finding 5: Progress has been made in reducing PA spread through upgrades to critical infrastructure (cleaning stations, track improvements, fencing), wild animal control, and initiatives to influence forest user behaviour. However, it remains unclear how much of the task is complete and what work still lies ahead—clear finish-lines and progress metrics are needed.

Infrastructure upgrades and behaviour change initiatives have been among the most visible achievements of the programme. Stakeholders consistently pointed to improvements in cleaning stations, track upgrades to “dry-foot” standards, and fencing as tangible steps that reduce soil movement and human-mediated spread of PA. Wild animal control has also advanced in some areas, addressing additional key vectors. These are critical tools for containment – stopping the movement of soil that may harbour PA, and in the case of track upgrades, also controlling localised movements of water that may harbour PA - and protecting healthy stands.

This has included targeted closures, supported by rāhui and Controlled Area Notices, to balance safe access and ensure long-term protection of significant kauri stands and forests. Much of the phased reopening of tracks, such as Cascade Falls and Zig Zag in Waitākere and the Tāne Mahuta walk in Waipoua, after significant infrastructure improvements were in train ahead of the NPMP coming into effect.

While significant progress is evident, the overall picture is not clear. Stakeholders asked, “How much of the job is done?” and “What’s left to do?”. There do not appear to be clear metrics to indicate completion status or remaining priorities either at national or local levels. For example, cleaning station standards have evolved, but it is unclear whether all high-risk entry points are equipped with cleaning stations or meet current specifications. Similarly, while there has been significant fencing on private land, it is not clear how much is still required to protect significant stands or forests. The same applies to wildlife control.

Defining “finish lines” for key interventions—such as the percentage of tracks upgraded, fencing completed or cleaning stations installed—would provide a stronger view of progress and greater accountability. It would also help prioritise investment where gaps remain, plan for ongoing maintenance costs, and assist in communicating progress confidently to funders and the public.





Finding 6: National planning and annual progress reporting should present a complete, system-wide picture of all activities contributing to NPMP objectives—irrespective of funding source—to ensure transparency and alignment across agencies, land managers, and partners.

The current NPMP planning and reporting approach does not provide a complete or system wide view of progress toward the Plan’s objectives. Tiakina Kauri’s annual reporting—prepared against the National Operational Plan—primarily reflects activities funded through its own budget, producing only a partial picture of delivery, risk, and performance. While these limitations are understandable, given the early stage of the NPMP, the lack of prior national coordination mechanisms, and the difficulty of sourcing consistent data across multiple partners, the impact is significant. Decision makers lack a consolidated view of overall effort, system wide risks, and performance.

Significant contributions by DOC, regional councils, iwi-led programmes, and community initiatives—funded through Vote Conservation, local government budgets, grants, and philanthropic sources—are not consistently captured or integrated. As a result, decision-making is constrained by incomplete information, and opportunities for prioritisation and resource alignment are missed. This lack of integration weakens the ability to demonstrate value for money to Ministers and the public. It weakens adaptive management because decisions are not based on complete evidence.

Strengthening both planning and reporting is essential. A more integrated and comprehensive framework would enable the programme to reflect the collective impact of all partners, identify gaps, reduce duplication, and support strategic prioritisation. Importantly, this is not just a technical exercise—it reinforces the principle that kauri protection is a shared national responsibility.

5.2 What improvements could be made to delivery of the objectives?

Finding 7: System wide prioritisation, landscape scale planning, and more consistent operational disciplines are required to better focus effort and ensure investment is directed to the areas that will deliver the greatest gains for kauri protection.

While the programme has made commendable progress in building relationships, capability and delivering interventions, there is still a perceived (based on interviews) lack of clarity around how priorities are set and how resources are allocated to achieve maximum impact. Interviews revealed concerns that priorities are overly influenced by relationships and strong support for a more systematic approach to planning—one that includes coordinated planning at a landscape scale across all kauri lands.

Several partners noted that funding and prioritisation decisions should be driven primarily by objective factors—such as disease distribution, forest vulnerability, cultural significance, visitor pressure, and other risk indicators—rather than by relationships or opportunistic projects. Tiakina Kauri personnel, however, emphasised that the management agency already applies a transparent, criteria based process with partner involvement across major workstreams. They also noted that both objective factors and the readiness of local partners are important determinants of success.

What was consistent across all perspectives is a shared preference for transparent prioritisation and investment decisions that optimise outcomes for kauri. The variation in views appears largely attributable to gaps in communication and limited visibility of the underlying decision making process, indicating an opportunity to strengthen understanding through clearer, more systematic information sharing.

Partners emphasised that operational discipline now requires strengthening. While many local initiatives have delivered strong results, interviewees noted variability in planning rigour and project management across regions and rohe. Although some early stage inconsistency is understandable, particularly given variation in capability among delivery partners, these differences are increasingly limiting. Divergent approaches reduce clarity, hinder comparability of progress, and complicate assessment of alignment with NPMP objectives. Improvement is therefore timely to ensure the programme can operate with greater consistency and effectiveness across kauri lands.

This call from partners reflects a positive stage in the programme's evolution. To date, the focus on building relationships and capability has been appropriate and necessary. The programme now appears ready for a measured shift toward stronger operational disciplines and a more delivery focused approach—an adjustment that may have capability implications for both Tiakina Kauri and its partners.

Finding 8: Stronger planning and alignment for kauri protection depends on genuine willingness from Tiakina Kauri, mana whenua, DOC, regional councils, and key community organisations to collaborate more closely.

Delivering the improvements outlined in Findings 6 and 7—such as establishing a system-wide view that reflects the scope of the National Pest Management Plan (NPMP) and enabling landscape-scale planning—will depend on genuine, willing participation from all kaitiaki and forest managers. This includes DOC, regional councils, mana whenua, and community organisations, as well as Tiakina Kauri's leadership in convening partners to agree on common standards and to coordinate planning, data collection, and reporting.

Achieving a system-wide approach to kauri protection under the NPMP will require Tiakina Kauri and partners to commit to genuine collaboration while respecting each other's autonomy. This includes:

- Collaborating actively: participating in joint landscape-scale planning forums convened by Tiakina Kauri.
- Sharing information openly: providing relevant data and insights promptly and transparently, supported by clear agreements to uphold data integrity and sovereignty.
- Respecting autonomy while aligning: upholding statutory and cultural responsibilities while embracing co-design and reciprocal influence.
- Adopting common standards: agreeing on shared protocols for planning, monitoring, data collection, and reporting to enable appropriate consistency and system-wide visibility.
- Invest in coordination: allocate resources—time, expertise, and funding—to support alignment and efficient processes.
- Maintain accountability: report progress against NPMP objectives alongside regional and cultural objectives to ensure transparency and trust.

Finding 9: Delivery must weave together and embed operational research, mātauranga and adaptive management, with a strong emphasis on place-based approaches and scaling the use of proven tools (e.g., phosphite treatment).

The programme's long-term success depends on effectively weaving together science and mātauranga within an adaptive management model. Science and mātauranga have played a foundational role in the programme's design and underpin the NPMP and its implementation. However, continuing to strengthen this and embed adaptive management remains critical, and to achieve this a gap in science relationships needs to be addressed (this is elaborated below).

Adaptive management in the context of the PA NPMP refers to a structured, evidence driven approach that enables the programme to learn and adjust as conditions change and new knowledge emerges. For kauri protection, this means using monitoring data, scientific research, and mātauranga to reassess risk, test assumptions, and refine interventions on an ongoing basis. Because PA is an evolving pathogen with variable expression across landscapes and forest types, adaptive management requires continuous feedback loops—regularly analysing surveillance results, track use patterns, hygiene compliance, forest health indicators, and community insights, and then modifying strategies, operational practices, and investment priorities in response. In practice, this involves setting clear hypotheses, monitoring outcomes, comparing results against expectations, and making timely adjustments to ensure that decisions remain aligned with NPMP objectives and that the programme remains responsive to emerging threats and opportunities.

This is particularly important for rapidly scaling proven tools such as phosphite treatment, which has demonstrated efficacy but remains underutilised (see case study 1), as well as improved detection tools (e.g., the new oDNA diagnostic test developed by Jade Palmer at Victoria University), planting resilient kauri (resistant genotypes) where appropriate, and effective application of rongoā treatments.

Case Study 1 - Phosphite as a scalable solution for kauri protection and containing PA

Treatment with phosphite (phosphorous acid, phosphonate) is one of the few options for treating infected or threatened kauri trees. It has the potential to improve tree health, prevent PA infections and halt or reduce the rate of spread of diseased patches of forest.

In research trials carried out in the glasshouse and many diseased forests from 2009 to 2024, injection with phosphite into kauri trees infected by PA was proven to effectively suppress lesion development, aid healing, and lead in the long-term to an improvement in tree health. A review of research trials is provided in Horner et al. (2024) and best practice guidance is provided in Horner and Arnet (2024). Overall, this series of trials has provided overwhelming evidence for the efficacy of phosphite injection for the treatment and control of PA infection in kauri.

Scaling up phosphite application, implemented within an adaptive management framework informed by robust scientific evidence and mātauranga Māori, presents a substantial opportunity to enhance programme effectiveness. It provides a complementary tool alongside widely used measures that address soil-mediated spread of PA (such as cleaning stations and track upgrades).

In addition to safeguarding the health of individual trees or localised tree cohorts, phosphite has potential utility as a tactical barrier treatment at both local and landscape scales. When strategically deployed, such treatments may create zones of reduced host susceptibility that function to restrict or contain pathogen spread. Phosphite barriers are being implemented and maintained on a large scale overseas, particularly in Western Australia, and a previous scoping study in New Zealand identified the need for extending research and proof of concept trails in kauri forest (Horner 2016).

Practically, to achieve effective scaling will require careful planning and investment, including:

- building on existing scientifically validated protocols and guidance,
- expanding a trained, quality assured workforce,
- further developing operational systems for supply, access, and coordinated field deployment,
- monitoring and adaptive management systems built on robust long-term data,
- regulatory readiness, including consents/permits, safeguards, and cultural oversight,
- community pathways for private-land treatment and public engagement,
- continued research and science and mātauranga guidance and investment to refine and guide tool use, and
- confirming appropriate levels of investment.



Phosphite injections. Photo credit Ian Horner

Over the life of the NPMP, there appears to have been a deliberate separation maintained between PA science and operational advice. Interviews revealed that tensions between operational agencies and research providers persist. The 2023 Ngā Rākau Taketake (NRT) review¹⁸ highlighted this disconnect, noting that “differences between the strategic research intentions of the investment and the operational needs of agencies have led to a gap in the relationship” and that “action from all parties is needed to improve communication and the transfer of knowledge” (Campbell, 2023, p.17).

¹⁸Campbell, B. (2023). *Ngā Rākau Taketake Review Report*. Ministry of Business, Innovation and Employment.

The NRT review revealed frustration on both sides: operational agencies want actionable tools and rapid uptake, while researchers emphasise the need for long-term, foundational science. Without a structured pipeline linking strategic research to operational delivery, this gap risks becoming a “valley of death” in which valuable knowledge fails to inform management decisions (Campbell, 2023, p. 18).

This review revealed that the gap in the relationship identified through the NRT review has not been fully closed. Improving relationships, communication, and knowledge sharing still requires active commitment from all parties. Interviews with both operational agency representatives and scientists revealed that values such as “placing kauri at the centre” and “mahi tahi” (working together to protect kauri) are deeply shared, and there is a willingness and desire to fully close any residual gaps in collaboration - for the benefit of kauri and New Zealanders. There is a clear opportunity to build new research partnerships—particularly with the recently established Bioeconomy Science Institute—to accelerate innovation, strengthen adaptive management, and deliver the best outcomes for kauri.

A strong theme throughout the interviews was the importance of place-based approaches that integrate adaptive management, weaving together the strengths of science and mātauranga. This commitment was vividly demonstrated during the reviewer’s visit to Te Roroa, where their approach exemplifies how these principles can be put into practice (see case study 2).

Case Study 2 - Weaving science and mātauranga for kauri protection and a vision for Waipoua Forest

Waipoua Forest, home to Tāne Mahuta and other iconic kauri, continues to face the ongoing threat of PA. Te Roroa iwi, as kaitiaki of this taonga, have led a pioneering approach that blends western science with mātauranga Māori to protect the ngahere and uphold cultural responsibilities.

Driven by intergenerational obligations and community expectations, Te Roroa established a proactive response long before the NPMP was formalised. Their vision extends beyond containment—toward building resilience and restoring forest health through adaptive, evidence-based management grounded in tikanga.

Te Roroa’s approach weaves together knowledge systems, including the following use of scientific tools and mātauranga:

- Karakia and tikanga embedded in operational protocols, ensuring spiritual and cultural integrity in all interventions.
- Real-time diagnostics and adaptive monitoring to enable faster, more targeted interventions, improving management efficiency.
- Use of phosphite treatments to prolong kauri survival and contain PA, supported by PhD research under Ian Horner.
- Development of a laboratory on-site in Waipoua (in partnership with Victoria University) to detect PA in soil within 24 hours using an innovative oDNA test, replacing traditional three-week lab turnaround.
- Place-based strategies informed by cultural narratives and historical ecology, including recognition of seabird nutrient cycles as part of forest health.
- Soil conditioning trials using marine-derived nutrients (fish waste) alongside phosphite, reflecting traditional knowledge of ecosystem connectivity to build resilience.
- Remote sensing and GIS mapping to monitor canopy health and disease spread, complemented by ground surveillance.

Te Roroa has trained kaitiaki to undertake diagnostics, surveillance, and treatments, and to serve as ambassadors and educators. This model builds local capacity, enables rapid decision-making, reduces

reliance on distant facilities, and creates pathways for Māori-led science careers. Seven PhD collaborations since 2018 illustrate the depth of co-design and shared innovation.

Te Roroa have been proactive in sharing their experience with other groups, fostering collaboration and supporting wider application of these innovations.

Over the next decade, Te Roroa aims to mature Waipoua into a centre of excellence—a hub where science, mātauranga and operations converge. The vision encompasses expanded laboratory capabilities, park-and-ride, guided experiences linking Tāne Mahuta to Te Matua Ngahere, forest restoration and timber production, and an enduring learning ecosystem for rangatahi internships, PhD collaborations, and visiting practitioners.



Andrew and Taoho in front of the new lab.

Finding 10: Some regulatory mechanisms available under the NPMP have not been fully utilised, such as Kauri Protection Areas and Earthworks Risk Management Plans.

While the NPMP establishes a comprehensive regulatory framework, some mechanisms remain underutilised—Kauri Protection Areas (KPAs) being a prime example. KPAs were intended to provide enhanced management for kauri sites of exceptional ecological, cultural, and genetic significance. By applying stricter rules and targeted interventions, these areas would maintain PA-free zones, safeguard iconic and old-growth stands, and preserve genetic diversity and cultural heritage. Despite strong stakeholder interest, KPAs have not been implemented, representing a missed opportunity to strengthen long-term resilience and fully realise the intent behind the NPMP.

Similarly, the NPMP requires Earthworks Risk Management Plans for any soil disturbance within three times the dripline of a kauri tree canopy. Earthworks are typically associated with activities such as roading and forestry operations, land clearance and landscaping, residential and rural development, or drainage and stormwater works. Earthworks Risk Management Plans are designed to prevent the spread of PA by specifying objectives, site maps, hygiene protocols for vehicles, equipment and personnel, and procedures for managing soil and water. The intent is to ensure that high-risk activities such as excavation, construction, or track work do not inadvertently move contaminated material, thereby reducing the likelihood of PA transmission.

The NPMP also envisaged a complementary role for unitary and territorial authorities in embedding these requirements within Resource Management Act (RMA) processes¹⁹. By incorporating kauri protection measures into planning and consenting frameworks, councils are able to align local earthworks regulation with NPMP standards, reducing duplication and improving compliance.

¹⁹Note that since the NPMP was finalised, the Government has announced that the Resource Management Act (RMA) will be replaced by a new planning and natural environment system, introduced through the Planning Bill and the Natural Environment Bill. For further details on these reforms, see the Ministry for the Environment's announcement on the overhaul of New Zealand's planning system: <https://environment.govt.nz/news/government-unveils-major-overhaul-of-new-zealands-planning-system/>.

This integration was intended to leverage existing planning and consent mechanisms to strengthen biosecurity outcomes and ensure kauri protection is embedded in broader land-use planning and development controls.

In practice, Tiakina Kauri has advised that 12 Earthworks Risk Management Plans have been approved in the first three years of the NPMP (this includes DOC's Earthworks Risk Management Plans, which covers earthworks undertaken on Public Conservation Lands). The number of approvals granted seems implausible, falling well below what would be expected given the probable extent of earthworks activity within kauri hygiene zones during this period.

Auckland Council, along with Thames-Coromandel and Whangārei District Councils, has incorporated PA specific earthworks provisions into their current planning frameworks. However, significant gaps remain across parts of the Northland, Waikato, and Bay of Plenty regions. Beyond Auckland Council, there is little to no visibility of the role—if any—that other unitary and territorial authorities are playing in practice to implement or enforce these provisions. This gap in communication and reporting also needs to be addressed.

Finding 11: Compliance remains a critical gap in the programme. Accreditation systems are still under development, and there is an urgent need for clarity, including agreement on roles and resourcing.

Compliance remains one of the weakest links in NPMP implementation. Although the plan provides enforceable measures under the Biosecurity Act, these powers have not been fully operationalised. Interviews consistently described compliance as “the missing piece,” with current arrangements relying heavily on voluntary behaviour and goodwill. Education initiatives and infrastructure upgrades have helped, but persistent issues—such as off-track activity and breaches of rāhui—continue to undermine outcomes.

The NPMP envisaged a national compliance system led by the management agency, including authorised persons, policies, templates, and training programmes. Regional councils, DOC, and mana whenua were expected to play active roles in enforcement. In practice, these arrangements have not materialised. National compliance has received limited attention, and regional roles remain largely undeveloped.

Interviews revealed widespread frustration and mismatched expectations, particularly around resourcing. Both DOC and councils noted they could enforce compliance if adequately funded and if staff were authorised under the Biosecurity Act, but current budgets and priorities make this unrealistic. Training and support would also be required for NPMP-specific rules. Some councils flagged political sensitivities, such as concerns about being seen to assume the management agency's core enforcement role.

Tiakina Kauri's current efforts focus on building a nationally consistent, risk-based framework that prioritises education and partnership with mana whenua. Key actions include developing rules, policies, and processes, clarifying roles and responsibilities, and strengthening inter-agency coordination. A structured authorisation process—starting with mana whenua—has been introduced, supported by competency standards, fit-and-proper checks, and targeted training. Accreditation systems, including training for authorised persons and hygiene certification, are under development.

Leveraging existing compliance capability within councils and DOC, while building new capability within mana whenua as originally intended, remains a sound approach. However, urgent attention is needed to close the compliance gap—a recurring theme across interviews. While interviewees acknowledged the practical challenges of resourcing enforcement, many stressed that without credible consequences, the NPMP risks losing legitimacy. Suggestions included establishing joint compliance teams, involving iwi in enforcement, and strengthening alignment between education and penalties. Most agreed that a heavy-handed approach would be counterproductive, but there was consensus that the current absence of enforcement is unsustainable.

5.3 Has the general “health” (e.g., focus, relationships, collaboration) of the management of PA improved following the establishment of the NPMP?

Finding 12: Relationships, trust, and coordination among agencies, iwi/mana whenua, and stakeholders have significantly improved compared to earlier years before the NPMP. However, some parties have not fully benefited from these gains and remain less engaged.

The introduction of the NPMP and Tiakina Kauri has markedly strengthened collaboration across the kauri protection system. Today, there is a clearer sense of shared purpose, and many interviewees highlighted improved trust between Crown agencies and iwi/mana whenua. The partnership model embedded in Tiakina Kauri—acknowledging kaitiakitanga and the taonga status of kauri—has been a cornerstone of this progress. Several iwi leaders noted that this approach has enabled genuine co-design and unlocked opportunities for locally led delivery.

Kauri protection efforts across kauri lands were overwhelmingly described during interviews as “proactive, community-led, and collaborative”, with initiatives such as Kauri Ora, the Eastern CoLab, and iwi-led programmes across regions having delivered impressive and tangible results.

This is a significant achievement and reflects the progress made by Tiakina Kauri, particularly when viewed against the backdrop of the programme’s early challenges and the high level of public tension and scrutiny highlighted in the Environment Select Committee’s review in 2019²⁰.

However, these gains have not been universal. Interviews revealed that some parties feel on the margins, either due to limited capacity, perceived unclear engagement pathways, or historical mistrust. There remains unhelpful tension between operational and research personnel and agencies (see Finding 9), and interviews indicated that marginalisation extends to some mana whenua that have previously worked on PA/kauri dieback with research agencies. This needs to be addressed.

Regional hui initiated by Tiakina Kauri were widely regarded as a positive development. These gatherings created opportunities to share information, progress, and lessons learned, while enabling questions to be raised and feedback collected. Participants noted their potential to strengthen collaboration and operational alignment across regions. There was strong support for continuing regional hui as a regular feature of the programme.



Northern regional hui - September 2025

²⁰New Zealand Parliament. (2019). Inquiry into the Spread of Kauri Dieback Disease. Primary Production Committee Report.

Finding 13: Substantial growth in mana whenua capability and iwi leadership has been achieved, supported by Crown investment and considerable in kind contributions; maintaining and building on this progress will strengthen outcomes for all partners and for kauri.

One of the most significant achievements since the introduction of the NPMP has been the growth of mana whenua capability and iwi-led delivery – as was clearly intended under the NPMP. Interviews consistently highlighted the transformation from small, under-resourced teams to well-structured programmes with skilled kaimahi, strategic plans, and strong operational capacity. This shift has enabled some iwi to lead place-based interventions, weave together mātauranga with science, and innovate in ways that reflect cultural values and ecological realities.

The level of capability, innovation, strategic perspective and vision of several iwi interviewed (including a site visit to Waipoua and a day spent with the Team at Waipoua HQ/Forest) was truly impressive. Brief case studies for Te Roroa/Waipoua Forest (case study 2 on page 25) and Te Kawerau ā Maki/ Waitākere Ranges (case study 3) have been included to give a sense of the significant potential of iwi-leadership and initiatives for the benefit of kauri, communities and New Zealand.

There was broad acknowledgement of differing needs among iwi and hapū. Some settled iwi have developed impressive capability and experience over decades, while others—some yet to settle with the Crown and/or who have only recently begun to build capacity—are still establishing the foundations needed to protect their ngahere from PA. Others are somewhere in between. Despite these differences, a strong sense of manaakitanga (care for others, including generosity in sharing knowledge and expertise to uplift others) and whanaungatanga (building enduring relationships and networks) was expressed. Examples were provided of mana whenua openly providing guidance and experience to support others (see case studies 2 and 3).

Stakeholders consistently emphasised that Crown investment has been catalytic rather than sufficient on its own. Early funding from Tiakina Kauri provided a critical “runway” for iwi to recruit staff, establish systems, and leverage additional resources. One iwi leader described beginning with “literally just two people” and growing to a team of 16 through strategic partnerships and co-investment (see case study 3). This illustrates the multiplier effect of targeted Crown support when combined with iwi commitment, leadership, and ingenuity. Several interviewees highlighted that iwi bring not only capability and determination to deliver the mahi, but also leadership, networks, and a long-term, strategic perspective.

Sustaining this progress is now a critical challenge. Continued funding uncertainty threatens to erode hard-won capability and risks the loss of skilled personnel developed over several years. Securing and building on the gains from investment in mana whenua capability and iwi leadership is essential to realise long-term benefits, including ongoing innovation, strengthened partnerships, maintained momentum, and enduring intergenerational stewardship of kauri forests.

Case Study 3 - Te Kawerau ā Maki leadership and aspiration as kaitiaki for the Waitākere Ranges

Te Kawerau ā Maki (TKAM) are kaitiaki for the Waitākere Ranges, one of Aotearoa's most visited kauri landscapes. Since 2016, TKAM's leadership has centred on decisive rāhui and co-management engagement to halt human-mediated spread and reframe Auckland's approach to kauri lands.

TKAM imposed a rāhui in December 2017, prompting Auckland Council closures in early 2018. This reset enabled TKAM and Council to co-design a 'track bible' and reopen tracks to dry-foot standard, prioritising prevention over reactive closure. TKAM supported phosphite trials, allowed approved research under rāhui, and shared lessons nationally. A 2021 population-based survey confirmed that the disease was concentrated on forest edges, informing risk-based planning.

From two part-time kaimahi initially funded by Tiakina Kauri, TKAM grew to ~16 staff (leveraging other sources of funding) across surveillance, compliance advocacy, track planning, education and partnerships. Working with Auckland Council, TKAM adopted remote sensing and canopy health fingerprinting, positioning the Ranges as a long-term monitoring site integrating mātauranga and Western science.

TKAM's 'Heart of the Ngahere' proposal is for a ~6,145-hectare pest-free sanctuary, centrally located in the uninhabited core of the Waitākere Ranges Regional Park, using catchments, ridgelines, and waterways as natural boundaries for intensive pest control. This would be a quarantined upper-catchment Kauri Protection Area with layered legal protection, encircled by high-quality edge tracks to absorb visitor pressure. Framed as a 1,000-year plan, it aims to protect existing old-growth kauri and native wildlife, providing sanctuary space for the ngahere to thrive under active pest management aligned with Predator Free 2050 goals. A premium tourism model (re-imagined Hillary Trail) would channel kōha back into kauri protection.



5.4 Does investment in NPMP implementation remain a sound investment? If future funding initiatives arise, in what areas is additional investment likely to make the biggest difference?

Finding 14: Continued investment in the NPMP represents a high impact and cost-effective way to prevent the irreversible loss of kauri and preserve the cultural, environmental, and economic benefits it provides, with a high likelihood of success.

Continuing to invest in NPMP implementation represents a high-impact, cost-effective choice. The programme is highly feasible and strongly positioned for success compared to other biosecurity challenges, such as organisms with water- or air-borne reproductive cycles. PA affects a single host species (kauri), and its primary vectors—soil movement by humans, animals, and machinery—are controllable through proven interventions underpinned by sound science. Tools such as phosphite treatment, hygiene protocols, and track upgrades have demonstrated effectiveness and can be scaled with adequate resourcing.

Protecting kauri delivers enduring national benefits and honours Treaty of Waitangi commitments through genuine partnership with iwi and hapū. Kauri forests are iconic, forming a cornerstone of New Zealand’s identity, tourism, and ecosystem services. They hold profound cultural and spiritual significance for mana whenua and are a treasured part of our natural heritage, valued by New Zealanders and visitors alike. The programme embeds Māori perspectives in planning and delivery, ensuring decisions reflect shared aspirations. Investment offers exceptional value for money given kauri’s longevity and resilience when safeguarded—an intergenerational return few other programmes can match.

The cost of inaction far exceeds the cost of prevention. Loss of kauri would have irreversible ecological, cultural, and reputational consequences. NPMP aligns with national priorities, including biodiversity conservation, climate resilience, and tourism. Evidence strongly supports maintaining and, where possible, leveraging additional co-investment to secure these benefits²¹.



²¹Deloitte. (2018). Cost Benefit Analysis: National Pest Management Plan for Kauri Dieback Disease. Ministry for Primary Industries; Deloitte. (2019). Cost Benefit Analysis Addendum: National Pest Management Plan for Kauri Dieback Disease. Ministry for Primary Industries. New Zealand Institute of Economic Research. (2021). Kauri Disease Cost-Benefit Analysis: Modelling and Analysis of Intervention Options. Report to Ministry for Primary Industries. <https://www.nzier.org.nz> (Available upon request from NZIER)

Finding 15: The full value of managing PA to protect kauri—and the opportunities and benefits for New Zealand—is not well understood. Clearer measurement, stronger articulation, and more effective communication are needed, including bringing benefits to life through stories of local aspiration, progress, and success.

While stakeholders within the programme recognise the importance of protecting kauri, the broader opportunities and benefits—economic, ecological, cultural, and social—are not consistently communicated or understood by decision-makers and the public. Interviews highlighted concern that these benefits are often underplayed or obscured by technical language, weakening the case for sustained investment and limiting wider support.

The programme has compelling stories to tell of iwi-led innovation, successful containment efforts, and ambitious visions for tourism, regional economic growth, forest sanctuaries, and biodiversity restoration. However, these narratives rarely reach beyond immediate stakeholders. One partner interviewed noted that, “We need to bring the benefits to life—show what success looks like.” Others stressed the need for stronger metrics to quantify outcomes—such as avoided loss, tourism value, and carbon benefits—alongside qualitative stories that resonate emotionally and culturally.

The challenge is twofold: measuring impact and communicating it effectively. This requires a coordinated approach involving all partners that combines robust data with compelling, human-centred storytelling. Updating and expanding previous economic analyses will strengthen the evidence base. Showcasing local progress and aspirations, demonstrating intergenerational returns, and framing kauri protection within national priorities—such as sustainable tourism, regional economic growth, climate resilience, biodiversity conservation, and national wellbeing—will elevate the programme as a nationally significant investment. Mana whenua and local communities have a critical role in shaping and sharing these narratives. Without this, the programme risks being overshadowed by competing priorities.

Finding 16: Current funding uncertainty threatens momentum and capability retention. Securing funding for the term of the NPMP is essential and needs to be resolved with urgency.

Funding uncertainty is now the most immediate risk to the programme’s continuity and effectiveness. Tiakina Kauri is in the final year of funding appropriated for the programme in Budget 2021. Specifically, time-limited funding allocated in Budget 2021 is expiring – this is the funding used to fund operational activity at place delivered by mana whenua and communities - while funding for the management agency itself is permanently baselined.

DOC and northern councils also have some separate funding allocated to kauri protection from PA (e.g., to fund operational activities on public lands they administer), but this is currently managed outside the scope of the NPMP and the National Operational Plan.

Interviews revealed deep concern among partners that the current resourcing cliff (cessation of time-limited funding as above) threatens capability built over several years and may stall critical interventions. Iwi leaders and operational managers stressed that without clarity on future funding, they cannot retain skilled staff or plan long-term projects.

Partners emphasised that this is not just about maintaining momentum—it is about protecting the investment already made and continuing to enable “safe access” to kauri forests for New Zealanders, visitors (sustainable tourism) and for future generations. Crown funding has enabled the development

of iwi- and community-led delivery models, recruitment and training of kaimahi, and the establishment of operational systems. If these gains are lost, the programme will face significant delays and costs to rebuild capability.

Urgent resolution is required. Partners strongly advocated for multi-year funding - ideally aligned to the NPMP's statutory term - noting that short-term allocations undermine strategic planning and adaptive management. They also emphasised that Crown funding certainty is critical to leverage co-investment from other sources, including philanthropic, industry and regional investment (a list of potential funding sources is provided under Finding 17, that follows). Without adequate resourcing and stability, the programme risks reverting to fragmented, reactive approaches and the public tensions that characterised earlier years.

Finding 17: There is no clear consensus on what a long term, sustainable programme should look like. A shared understanding of future strategic direction—supported by enduring funding models that extend beyond the current NPMP term—needs to be more clearly articulated and agreed.

While the NPMP has provided a strong framework for near term delivery, uncertainty remains about the programme's direction beyond its statutory term. Interviews highlighted the absence of a clearly shared vision for future governance, funding arrangements, and long-term strategic priorities. Interviewees acknowledged that the NPMP has delivered structure and momentum, but many questioned what comes next.

There is a need to further explore sustainable funding models – models that account for the long-term nature of disease management in this context, extending beyond the current NPMP term²².

Potential funding options raised during interviews and that warrant consideration include:

- Multi-year Crown commitments
- The 'International Visitor Levy' (and other relevant sources of tourism-linked funding)
- Regional economic development funds
- Co-investment strategies with iwi, regions, industry/corporate and philanthropic partners
- Dedicated Māori development funds or cultural and heritage funding
- Conservation and heritage-focused grants
- International indigenous and conservation funding streams
- Offsets and market-based instruments, such as carbon credits, biodiversity credits and ecosystem service credits
- Community and crowdfunding initiatives

A clearly articulated, future-focused strategy (or equivalent²³) may enhance opportunities to attract external co-investment and retain capability. A sustainable programme will embed adaptive management, research, and mātauranga, while maintaining strong governance and operational delivery. Developing this vision collaboratively—and doing so now rather than later—will be essential to secure continuity and confidence.

²²The current term of the NPMP is 10 years, through to 1 August 2032. An NPMP can be extended beyond its initial term. NPMPs can be amended, revoked, revoked and replaced, or left unchanged following a review under section 100D of the Biosecurity Act 1993.

²³An alternative to a standalone strategy raised by Biosecurity New Zealand is for strengthened content relating to strategic direction within an updated National Operational Plan.

5.5 Does MPI remain the best option for housing the Tiakina Kauri management agency? What, if any, viable alternatives warrant consideration?

Finding 18: MPI remains the best option for housing Tiakina Kauri during the term of the NPMP. For the longer term, alternative options warrant further investigation.

MPI remains the most practical and stable option for housing Tiakina Kauri during the current NPMP term. Its statutory authority under the Biosecurity Act, national reach, ability to access MPI's internal infrastructure and technical capability (legal, compliance, Plant Health and Environment Laboratory etc.) make it the logical choice under current conditions. Interviews indicated strong consensus that the cost, complexity, and risk of changing the management agency now would be high, and there was no support for such a change.

Interviewees acknowledged that the current arrangement may not represent the most effective long-term model. Many expressed a willingness to explore alternative governance structures and management agency options beyond the NPMP's 10 year horizon—particularly those that more fully embody Treaty partnership, improve access to potential funding mechanisms, and support more efficient and effective delivery.

Suggested options included:

- Joint Crown–iwi entities,
- Iwi-led governance models,
- Stand-alone models (equivalent to OSPRI), and
- Council-led arrangements leveraging regional expertise (e.g., under the umbrella of Te Uru Kahika)

The option of DOC as the management agency was considered but received little support. Reasons included DOC's Public Conservation Land-focused mandate, limited ability to secure funding, and lack of Biosecurity Act compliance powers²⁴—making it less suitable than MPI for a whole-of-system programme requiring national reach and enforcement capability.

While opinions varied on feasibility, there was clear agreement that these options should be actively explored when developing long-term strategic direction and evaluating sustainable funding mechanisms to secure intergenerational investment.



²⁴Noting that this is an incorrect perception – DOC is eligible to legally access powers through an NPMP under the Biosecurity Act 1993, although a plan change would be required under current legislation for DOC to be appointed as the management agency and access Biosecurity Act powers.

Finding 19: Strengthening Tiakina Kauri’s regional presence would further improve engagement and enhance operational effectiveness.

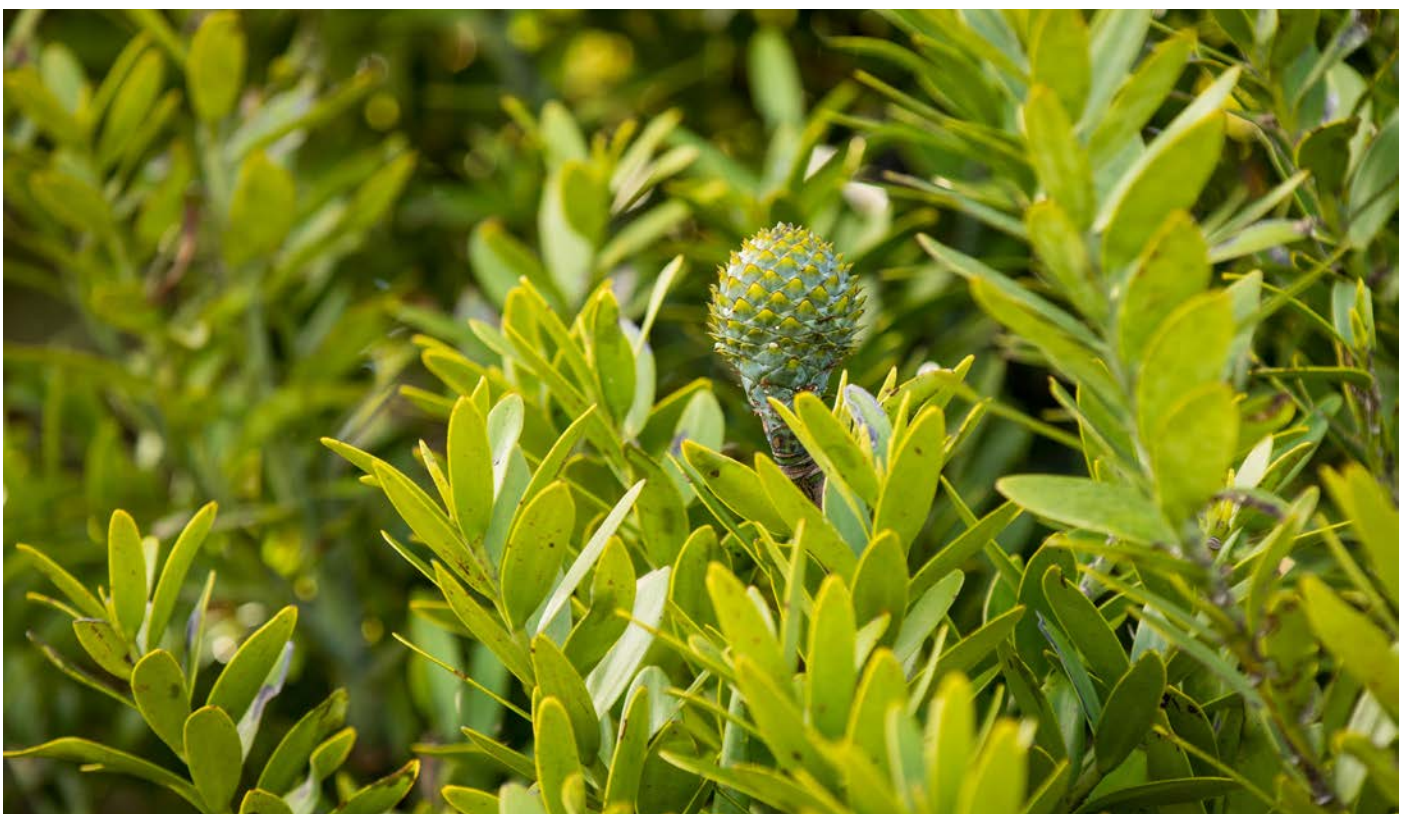
Interviews consistently emphasised that while proximity to MPI and Ministers supports governance and policy functions and essential Crown funding, effective operational delivery and relationship building also require a stronger regional presence. Stakeholders stressed that “being on the ground matters”—particularly for building trust with mana whenua and enabling locally led initiatives. As one participant observed, “It makes sense for the agency to have its heart where the forests are.”

The concept of situating Tiakina Kauri within a kauri region—such as Northland or Auckland—was raised repeatedly. Co-location with iwi or regional partners was seen as an opportunity to:

- Reinforce Treaty partnership principles,
- Improve responsiveness and decision-making,
- Create efficiencies and shared services, and
- Provide staff with firsthand experience of forest management, strengthening credibility and operational insight.

Biosecurity New Zealand indicated it has attempted to balance its centralised role – as a Wellington-based department accountable to Ministers – with the need for strong regional presence and connection across kauri lands. This includes basing over half of Tiakina Kauri staff in kauri regions (including its new manager based in Auckland), convening in-person governance meetings and most key hui in kauri regions, and extensive travel by Wellington-based managers and staff to sustain a presence and sustain relationships in kauri lands.

There is a mismatch in expectations between Biosecurity New Zealand and some of its partners. Biosecurity New Zealand and its partners may benefit from constructive dialogue to better align expectations and understand each other’s constraints. Together, they could also explore practical and reasonable opportunities to strengthen regional presence in ways that meet MPI’s needs while improving how partners and communities connect with Tiakina Kauri—and how Tiakina Kauri connects with them.



Conclusion

The review confirms that the NPMP and Tiakina Kauri have delivered substantial progress in strengthening governance, embedding Treaty partnership principles, and implementing practical measures to protect kauri. Public awareness has increased significantly, iwi-led capability has grown, and proven tools such as hygiene measures and phosphite treatment provide a strong foundation for success.

However, critical gaps remain in compliance, integrated planning, and reporting, and there is a need for stronger operational disciplines and long-term funding certainty. Addressing these gaps is essential to maintain momentum and deliver on the NPMP's objectives.

Further investment in NPMP implementation represents a high-impact, cost-effective strategy that delivers enduring benefits for biodiversity, climate resilience, regional economic development, tourism, and national wellbeing. Protecting kauri safeguards an iconic taonga central to our cultural wellbeing and national identity - an intergenerational return on investment.

Sustaining progress will require urgent resolution of resourcing pressures and stronger system wide coordination. Robust, unified governance is essential—not only to shape a coherent, future focused strategic direction, but also to ensure effective implementation across the system. While MPI remains the most practical host for Tiakina Kauri during the current NPMP term, long term success depends on all partners embracing their shared responsibilities. Enduring funding, collaborative governance, and a commitment from every partner to align and integrate programmes—regardless of funding source—will be key to protecting kauri for future generations.



Appendix 1: Summary of review findings

1. Introduction of the NPMP and Tiakina Kauri has significantly strengthened programme structure, sharpened focus, and improved coordination, while providing a clear mandate and support for locally led initiatives.
2. The programme is strengthening its collaborative approach by supporting locally led action, building capability on the ground, and ensuring national coordination enables practical delivery at place.
3. Public awareness has risen significantly through national campaigns and locally driven initiatives. To sustain impact, these need to continue and be complemented by more targeted engagement with high-risk forest users (e.g., hunters).
4. Significant progress has been made in mapping the distribution of PA and kauri across forests and stands. However, gaps remain—some forests still require robust baseline data to confirm disease status. There is also an opportunity to translate existing data into actionable management insights and build long-term trend monitoring.
5. Progress has been made in reducing PA spread through upgrades to critical infrastructure (cleaning stations, track improvements, fencing), wild animal control, and initiatives to influence forest user behaviour. However, it remains unclear how much of the task is complete and what work still lies ahead—clear finish-lines and progress metrics are needed.
6. National planning and annual progress reporting should present a complete, system-wide picture of all activities contributing to NPMP objectives—irrespective of funding source—to ensure transparency and alignment across agencies, land managers, and partners.
7. System wide prioritisation, landscape scale planning, and more consistent operational disciplines are required to better focus effort and ensure investment is directed to the areas that will deliver the greatest gains for kauri protection.
8. Stronger planning and alignment for kauri protection depends on genuine willingness from Tiakina Kauri, mana whenua, DOC, regional councils, and key community organisations to collaborate more closely.
9. Delivery must weave together and embed operational research, mātauranga and adaptive management, with a strong emphasis on place-based approaches and scaling the use of proven tools (e.g., phosphite treatment).
10. Some regulatory mechanisms available under the NPMP have not been fully utilised, such as kauri protection areas and earthworks risk management plans.
11. Compliance remains a critical gap in the programme. Accreditation systems are still under development, and there is an urgent need for clarity, including agreement on roles and resourcing.
12. Relationships, trust, and coordination among agencies, iwi/manua whenua, and stakeholders have significantly improved compared to earlier years before the NPMP. However, some parties have not fully benefited from these gains and remain less engaged.

13. Substantial growth in mana whenua capability and iwi leadership has been achieved, supported by Crown investment and considerable in kind contributions; maintaining and building on this progress will strengthen outcomes for all partners and for kauri.
14. Continued investment in the NPMP represents a high impact and cost-effective way to prevent the irreversible loss of kauri and preserve the cultural, environmental, and economic benefits it provides, with a high likelihood of success.
15. The full value of managing PA to protect kauri—and the opportunities and benefits for New Zealand—is not well understood. Clearer measurement, stronger articulation, and more effective communication are needed, including bringing benefits to life through stories of local aspiration, progress, and success.
16. Current funding uncertainty threatens momentum and capability retention. Securing funding for the full term of the NPMP is essential and needs to be resolved with urgency.
17. There is no clear consensus on what a long term, sustainable programme should look like. A shared understanding of future strategic direction—supported by enduring funding models that extend beyond the current NPMP term—needs to be more clearly articulated and agreed.
18. MPI remains the best option for housing Tiakina Kauri during the term of the NPMP. For the longer term, alternative options warrant further investigation.
19. Strengthening Tiakina Kauri’s regional presence would further improve engagement and enhance operational effectiveness.

Appendix 2: List of interviewees

Name	Organisation
Adam Duncan	Auckland Council
Alan Cockle, Jill Taylor, Ken Hughey, Rachel Kelleher, Sandra Heihei, Thomas Hohaia	Tiakina Kauri Governance Group
Alan MacKenzie, Alana Webb, Brian O'Shea, Chanchal Chawla, Gini Letham, Mike Nathan, Mita Harris, Stephanie Tomscha	Tiakina Kauri team
Avi Holzapfel, Ben Reddiex, Mike Hogg	Department of Conservation <i>(noting Mike joined TK subsequent to the interview)</i>
Beccy Ganley, Ian Horner, Nari Williams	Bioeconomy Science Institute
Clive Stone	Ngāti Wai
Debbie Martin	Kauri Ora: Iwi CoLab (Ngāti Kuri, Ngātiwai, Te Rarawa + Te Roroa)
Don McKenzie	Northland Regional Council
Edward Ashby	Te Kawerau ā Maki
Greg Corbett	Bay of Plenty Regional Council
Iain Maxwell	Te Uru Kahika
Lindsay Bulman	Independent (previous involvement in relation to science and research coordination)
Patrick Whaley	Waikato Regional Council
Snow Tane, Taoho Patuawa and Te Roroa kaimahi	Te Roroa

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