Wilding Conifer Management in New Zealand

Understanding the Gaps and Limitations in the Policy, Statutory, and Regulatory Framework and Potential Options for Addressing Them

Report prepared for the Wilding Pine Network by Tamsin Page

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Foreword

by the Wilding Pine Network

Although much progress has been made in recent years to control the spread of wilding conifers, there are still gaps and limitations in the current policy and regulatory frameworks which relate to wilding conifer management. The Wilding Pine Network (WPN - formerly known as the NZ Wilding Conifer Group) is concerned that these gaps and limitations may allow ongoing and future wilding conifer spread, in spite of recent control progress. The WPN is particularly concerned that the significant investment already made in wilding conifer control will not be able to be protected. Additionally, new areas of wilding conifer spread might not be prevented or effectively mitigated by the current policy settings.

The WPN commissioned this report to identify the gaps and limitations in the policy and legislative framework and recommend potential options to address these issues.

The WPN is deliberating on the recommendations in this report. We acknowledge that conifers can be both a resource and a pest, and we need to take a balanced and holistic approach to policy and legislative changes. Additionally, education and awareness are a critical component of behaviour change, alongside potential policy and regulatory changes.

We are considering all of the recommendations in this report, and in particular the promotion of a National Pest Management Plan for wilding conifers. We also see the need to amend the Wilding Tree Risk Calculator used in the National Environmental Standards for Plantation Forestry to make it a more transparent and reliable tool. Through this report, we have also identified that we need a better understanding of existing seed sources and their spread risk. Therefore, we will explore mapping high-risk areas of wilding conifer spread to better understand and proactively manage wilding conifer spread risks

It is our hope that in sharing this report, we will help elucidate the gaps and limitations in current policy and legislation, and we will all work together towards equitable changes to prevent and mitigate future wilding conifer spread.

Please direct questions and comments on this report to: info@wildingpinenetwork.org.nz.

Richard Bowman

Chair of the Wilding Pine Network

6 April 2022

EXECUTIVE SUMMARY

The Wilding Pine Network commissioned this report because it is concerned that despite progress made in addressing the existing wilding conifer problems in Aotearoa, the current policy and regulatory frameworks may not prevent ongoing and future wilding conifer spread from occurring. The Wilding Pine Network is particularly concerned about the lack of certainty that areas where significant investment has been made in wilding conifer control will be protected from reinvasion, or that new areas of wilding conifer spread will be prevented or effectively mitigated.

This report identifies important issues, gaps and limitations within the current policy and regulatory settings and elaborates on potential areas for change and action to address these. Changes to address the identified issues are central to ensuring that:

- future wilding conifer spread is effectively prevented or mitigated;
- the significant investment that has been made in existing wilding conifer control is protected; and
- an ongoing cycle of 'legacy' wilding conifers is prevented.

Some of the potential changes identified within this report include, but are not limited to, the following:

- changes to the National Environmental Standards for Plantation Forestry to address the wilding conifer related issues identified in the Year 1 Review of the Standards
- making changes to the Wilding Tree Risk Calculator
- not utilising the Wilding Tree Risk Calculator as determinative of permitted activity status
- addressing current regulatory gaps in relation to permanent conifer forests falling outside the National Environmental Standards for Plantation Forestry
- exploring the feasibility of a National Pest Management Plan for wilding conifers to address regional inconsistency
- specifying commercially valuable, spread-prone species as a pest in specifically defined situations

If the applicable regulatory frameworks are applied effectively, and key gaps addressed, they have the potential to ensure more equitable outcomes about where wilding conifer control costs fall over the long term. Much of this can be achieved through the application of regulatory mechanisms, and through those mechanisms incentivising alternative outcomes.

STATUTORY, REGULATORY AND POLICY FRAMEWORK

The statutory and regulatory framework relating to wilding conifer management and prevention sits largely under the Resource Management Act 1991 (the RMA) and the Biosecurity Act 1993 (the BSA). The key regulatory components within these frameworks are District Plans, the National Environmental Standard for Plantation Forestry (the NES-PF), and regional pest management plans (RPMPs).

Policy settings (and associated programmes) of most relevance are those that support and incentivise conifer planting – e.g., the Emissions Trading Scheme (the ETS), Overseas Investment Office processes, the One Billion Trees programme – and those directly addressing current wilding conifer problems – e.g., the NZ Wilding Conifer Management Strategy and the National Wilding Conifer Control Programme ($100M over 4 years). The Climate Change Commission's recent

recommendations regarding policy relating to forestry and tree planting are also relevant. These emphasise a need to shift away from reliance on exotic forests to meet emissions reduction targets, to a focus on stopping emissions at source, and more strategic management of forests as a long-term carbon sink, with an increased focus on native forests.

CHALLENGING CHARACTERISTICS OF WILDING CONIFER SPREAD

There are some key characteristics of wilding conifer spread that contribute to the complexity and challenges of wilding conifer management. These include:

- Conifers can be both a pest and a valuable resource. Wilding conifers are a pest, while planted conifers may be a valuable resource but can also be a source of wilding conifers. Where source trees are valuable and have been planted legally, this can mean their removal is complex, or potentially infeasible.
- Wilding conifer spread occurs across property boundaries, but regulatory frameworks are constrained by property law and cannot require source tree owners to remove wilding conifers on another person's property.
- Wilding conifer spread is variable and the "seed rain" can occur over long distances. Most occurs within 200m of the source tree, but longer distance spread, over multiple kilometres (e.g., 20 kms plus), also occurs and can be highly variable over time, distance, and direction, making it difficult to predict or control.
- Wilding conifer effects are delayed and are cumulative. There is a significant lag phase (5-10yrs) between the planting of conifers and any wilding conifer spread occurring. There are even further delays before the effects of wilding spread become apparent, as effects are cumulative, building over years as wilding density increases. Seed spread can occur every year, so the cumulative impact over the reproductive life of source trees can be significant and extensive. If wilding conifers are not removed before they reach coning age, they produce further wilding conifers, resulting in exponential increases in the scale and extent of wilding conifer spread.
- Wilding conifer spread can impact on a wide range of values, and impacts are not limited to conservation land or areas formally identified as 'outstanding' or 'significant'.
- Factors that mitigate wilding spread can quickly change. Downwind and adjoining land use has a strong impact on wilding conifer spread, meaning land use change can have a significant impact, e.g., destocking and land 'retirement' can significantly increase wilding conifer spread risks, while intensification of land use can considerably reduce it.

ISSUES, GAPS AND LIMITATIONS

RMA Framework – National Environmental Standards For Plantation Forestry

Within the RMA framework, a number of issues associated with the NES-PF have been identified, as well as potential regulatory gaps in relation to conifer plantings outside the scope of the NES-PF.

The NES-PF provides nationally consistent regulations to manage the environmental effects of plantation forestry. It addresses eight core forestry activities, enabling these to be carried out as permitted activities, subject to prescribed conditions. It prevails over local authority plan rules except in limited, specified circumstances. The core activities relevant to wilding conifer management are Afforestation and Replanting, and the key permitted activity condition is application of the Wilding Tree Risk Calculator (WTRC) and a resulting score of less than 12.

Some important issues relating to wilding conifers and the NES-PF were identified in the 'Year One Review' of the NES-PF (undertaken by Te Uru Rākau Forestry NZ). These issues, and some of the potential changes discussed in relation to them, include:

- NES-PF documentation requirements for afforestation proposals do not provide confidence in WTRC assessments. The minimum required standard of wilding risk assessment should be clarified and provision of evidence and documentation to support a WTRC score should be required.
- WTRC assessments are required to be undertaken by a 'suitably competent person'. The current definition of this is insufficient and should be strengthened.
- Notification periods are too short and the process for challenging a WTRC score is not straightforward. This undermines the integrity of the WTRC permitted activity condition.
- There are inconsistencies between the afforestation and replant settings. These should be aligned to provide consistency and clarity in the land use obligations.
- Further implementation support for councils and the forestry sector is required, particularly in relation to application of wilding conifer controls.
- Development of a geospatial layer identifying areas of current wilding conifers and areas of high conservation value could assist site-specific risk assessments.
- Consideration should be given to a more precautionary wilding conifer spread risk permitted activity threshold, and to changes to some of the WTRC settings, given that:
    - The WTRC is underpinned by criteria that can be subjectively applied and that are subject to change over time, which can result in inconsistencies in a regulatory context where a high degree of certainty is important.
    - Surrounding land use is a key factor in wilding spread risk assessment under the WTRC. This land use can change during the life of a forest but the WTRC only assesses surrounding land use as it exists at the time of assessment.
    - The NES-PF and permitted activity conditions cannot authorise or require the control of wilding conifers on another person's property.

These issues highlight some important weaknesses in the current NES-PF settings relating to wilding conifer management, and changes to address these issues should be actively supported. However, more substantial change is necessary if the risk of future 'legacy' wilding conifer problems is to be more effectively addressed. These changes could include:

- A more precautionary approach should be taken to afforestation and replanting, with more robust and thorough assessment of wilding conifer spread risk and the application of effective and ongoing prevention and mitigation measures.
- A WTRC score should not be determinative of permitted activity status. There is considerable subjectivity inherent within a WTRC assessment, there are indicators that are changeable and outside the control of the forest owner, and the WTRC assessment makes permitted activity status dependent upon assessment by a third party, which is not good planning practice. More certain, objective criteria should be used to determine activity status.
- The current permitted activity setback conditions in the NES-PF are unlikely to adequately mitigate wilding conifer spread and should be increased to 200m.

Potential Gaps And Inconsistencies - Permanent Conifer Forests

The NES-PF applies to afforestation and replanting of "plantation forests". This is defined as a forest deliberately established for commercial purposes that "has or will be harvested or replanted". Although the NES-PF lists plantings specifically excluded from its ambit, including plantings of less than 1ha and shelterbelts, this list does not include forest plantings not intended to be harvested (e.g., permanent or 'carbon forests'). This has the potential to create a regulatory gap due to confusion and uncertainty about regulatory responsibility for these forests.

Regulatory gaps mean there are no opportunities to prevent or mitigate potential wilding conifer spread effects of conifer plantings. In some areas, this poses a risk of unmitigated wilding spread and the establishment of new areas of 'legacy' wilding conifers in the future. This risk is a particular concern in relation to permanent conifer forests which have been increasing significantly due to incentivising factors within current policy settings, particularly the ETS.

In addition to the potential for gaps, this framework effectively creates a dual (and potentially inconsistent), approach to conifer planting and afforestation under the RMA, despite the main potential environmental effects being broadly the same, regardless of the purpose or long-term intention for the planting. In the case of commercial conifer forests, this dual approach is based solely on whether the forest "will be harvested". However, under the NES-PF evidence of an intent to harvest is not a requirement for afforestation to proceed. Given this, if the approach taken to afforestation in the NES-PF is more permissive than the relevant council Plan, or vice versa, the potential arises for forest owners to exploit the opportunity to be selective in the regulatory pathway they follow.

Two main options for addressing the potential regulatory gaps and inconsistencies are discussed. These are:

- extending the scope of the NES-PF to include all new conifer afforestation; or
- retaining the status quo and addressing permanent forests through District Plans.

Regardless of the approach taken, urgency in addressing current regulatory gaps is necessary, and as a minimum, all Councils should be clearly informed about what conifer plantings are not covered by the NES-PF and encouraged to ensure their Plans effectively address the potential wilding conifer spread effects of these.

BIOSECURITY ACT FRAMEWORK – REGIONAL PEST MANAGEMENT PLANS

Lack Of Consistency

In 2016, MPI released guidance material for use by councils in the development of wilding conifer programmes in RPMPs to improve regulatory consistency and effectiveness. MPI signalled the 'bare minimum' components of the material it hoped to see adopted into RPMPs as good practice. A desktop review of all current RPMPs shows that although there has been an increase in RPMPs that address wilding conifers, there remains considerable variation in the approaches taken. The extent to which the 'bare minimum' provisions recommended by MPI have been incorporated is variable, and even the recommended definition of "wilding conifers" has not been universally utilised.

Gaps

A key gap in RPMPs is a lack of rules to keep areas that are clear of wilding conifers, clear. Some include rules requiring landowners to keep areas clear where publicly funded wilding conifer control

has been undertaken, but none include a 'clear land' rule that applies generally to wilding conifers, regardless of species, source, or previous control operations.

History has shown that an important contributor to wilding conifer problems is a lack of early action, and that the cost of wilding conifer control increases significantly the longer any spread is left uncontrolled. Therefore, this type of rule is an important mechanism to help prevent new areas of wilding conifers becoming established due to a lack of early action. They are particularly important given the current policy and economic drivers incentivising afforestation coupled with the issues and potential gaps identified in the RMA framework. Furthermore, they may potentially incentivise landowners to seek alternative solutions directly with source tree owners, in a way that the regulatory framework is unable to impose.

LIMITATIONS

As with the RMA framework, a fundamental limitation within the BSA regulatory framework is the inability to require owners of source trees to undertake control of wilding conifers that spread onto others' property. This can create a significant burden on the 'receiving' property owner, but also makes it difficult for regulators to incentivise source tree owners to either remove the source trees or take action to prevent or mitigate the spread.

The other key limitation for RPMPs is management of source trees, particularly source trees that have been legally planted and have commercial or functional value. Declaring a conifer species a pest is feasible where source trees hold little value, and the use of pest agent rules may be feasible for individual trees and small plantings. However, where the source trees are part of a forest or large planting with considerable commercial value, there is very limited scope for RPMPs to directly address these.

POTENTIAL CHANGE/ACTION

Potential changes and action to address issues within the BSA framework include:

- Explore the feasibility of a National Pest Management Plan for wilding conifers to address current inconsistencies and variability in RPMPs, and to potentially provide a more cost-effective and efficient means of funding and implementing wilding conifer pest management.
- RPMPs should take a more proactive, preventative regulatory approach by introducing broadly applicable clear land rules to require early control of all wilding conifers, regardless of species, source, or previous wilding control operations.
- More consistent specification of low-value, spread-prone conifer species as pests in RPMPs to prevent new plantings of these species should be encouraged.
- Councils collectively seek detailed analysis of BSA framework requirements to determine potential regulatory options for managing legally planted, non-pest species source trees.
- Explore the feasibility of pest agent rules that apply to new plantings from a specified date.
- Consideration be given to specifying commercially valuable, spread-prone species a pest in specifically defined situations.

RATIONALE FOR CHANGE

There are a number of factors that provide the rationale for the changes needed to address many of the issues identified in this report, including:

- The primary opportunity to ensure that effective measures to prevent, mitigate, and remedy wilding conifer spread effects are cost-effectively and equitably implemented, is at the time that planting is proposed. Opportunities are limited to non-existent if a permissive approach to afforestation is taken, because regulatory frameworks are constrained by property law, and cannot subsequently require the owner of source trees to access another person's property to remove or monitor wilding conifers.
- History has clearly (and expensively) illustrated that a lack of precaution or requirements at the time of planting in relation to species, location, and prevention and mitigation measures contributes to a 'legacy' of complex and costly problems.
- Because of the considerable delays between conifer planting and wilding conifer spread, an adaptive management approach to mitigating factors such as buffer distances, siting of planting, or species planted, is impractical, as by the time effects become apparent, investments have been made and the land use activity is well established. This makes a precautionary, preventative approach to wilding conifer spread at the initial planting stage even more important.
- A permissive and enabling approach to new conifer planting that does not ensure equitable responsibility for preventing and mitigating externality effects of wilding conifer spread, does little to incentivise research and development into alternative species, hybrids, or sterile trees.
- In the absence of sterile trees, there will likely always be some wilding conifer spread from conifer plantings. Inaction and a lack of regulation requiring early action contributed significantly to current and historic wilding conifer spread and the exponential increase in control costs. Broadly applicable obligations to clear wilding conifers before coning are therefore important to avoid new and repeat infestations.
- Imposing obligations on 'receiving' landowners may incentivise the initiation of privately negotiated alternative arrangements that impose the costs of wilding control more equitably than the regulatory framework is able to.
- Managing existing seed sources can be complex but addressing them is fundamental to the long-term effectiveness of wilding conifer pest programmes. A collective approach by management agencies may enable better evaluation of new and/or innovative options for managing seed source sites.
- Taking a more flexible but specific approach to pest specification of commercially used species, based on sound knowledge of species spread characteristics and environmental vulnerabilities, could be an important factor in ensuring "the right tree in the right place".

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PROJECT OBJECTIVE

The objective of this piece of work is twofold:

1. To identify key gaps, issues, and/or limitations within the policy, statutory and regulatory framework relating to wilding conifer management and prevention, that are relevant to the 2 issues of concern set out below; and
2. To identify potential options or changes to address key gaps and limitations in the framework, which the Wilding Pine Network could promote.

ISSUES OF CONCERN

Despite the progress being made in relation to existing wilding conifer problems, the Wilding Pine Network has 2 primary issues of concern. These are:

1. The lack of certainty that the investments and gains being made in wilding conifer control will be able to be effectively protected; and
2. The lack of certainty that the externality impacts of new and existing conifer plantings arising from wilding conifer spread to other land, will be prevented, or effectively and adequately mitigated.

Given these concerns, the Wilding Pine Network wishes to better understand the gaps and limitations of the policy, statutory and regulatory framework relating to wilding conifer management and prevention, and the potential avenues that may be available to address these.

PROJECT TASKS

1. Provide a brief overview of the different components of the current policy, statutory and regulatory framework relating to wilding conifer management and prevention. This will also include key policy settings and programmes that influence planting and afforestation (e.g. Emissions Trading Scheme, One Billion Trees programme).
2. Summarise the key characteristic(s) of wilding conifer spread that create fundamental challenges and limitations for the policy, statutory and regulatory framework.
3. Review the recent Report on the Year 1 Review of the NES-PF
    a. Summarise the issues/gaps/shortcomings identified by the review that are relevant to wilding conifer management and prevention, including associated recommendations.
    b. Provide advice on the key recommendations and/or issues identified through the review that the Wilding Pine Network could support and/or seek to have addressed.
    c. Identify any additional issues or gaps associated with the NES-PF that are relevant to the Wilding Pine Network's 2 issues of concern, including potential options or arguments for change.
4. Non "plantation" forests
    a. Outline the potential regulatory gap relating to management of conifer plantings not covered by the NES-PF.
    b. Identify how this gap could potentially be addressed, and any significant issues or limitations to the effectiveness of doing so.
5. Regional Pest Management Plans
    a. Review wilding conifer provisions contained within all regions' RPMPs.
    b. Identify 'good practice' provisions that are/should be included.

c. Identify any key gaps and/or limitations, and potential additional provisions or approaches that could be considered to better address the 2 issues of concern.

6. Outline any other potential avenues or options for addressing the Wilding Pine Network's 2 issues of concern that could be considered or pursued within the policy, statutory and regulatory framework relevant to wilding conifer management and prevention.
7. Outline the main components of the rationale(s) for seeking change to address key gaps and limitations in the current framework and/or its implementation. This may assist the Wilding Pine Network to establish a baseline 'position' to inform its initiatives.

SECTION 1: POLICY, STATUTORY AND REGULATORY FRAMEWORK OVERVIEW

Project Task 1:
Provide a brief overview of the different components of the current policy, statutory and regulatory framework relating to wilding conifer management and prevention. This will also include key policy settings and programmes that influence planting and afforestation (e.g., Emissions Trading Scheme, One Billion Trees programme).

The statutory and regulatory framework relating to wilding conifer management and prevention sits largely under two key statutes – the Resource Management Act 1991 (the RMA) and the Biosecurity Act 1993 (the BSA). The RMA framework provides the mechanisms for managing the effects of land use activities, and therefore has the potential to apply controls and conditions to prevent or mitigate wilding conifer spread from new conifer plantings. The BSA framework provides the mechanisms for addressing the control or removal of wilding conifers, so in broad terms, applies after wilding conifer spread has occurred. The key components of the policy, statutory and regulatory framework relating to wilding conifer management and prevention are illustrated in Table 1.

RESOURCE MANAGEMENT ACT 1991

RMA → NES-PF → District Plans

The RMA establishes a hierarchy of planning instruments. At the national level, National Policy Statements and National Environmental Standards may be developed. At the local government level, Regional Councils have a Regional Policy Statement and Regional Plans, and Territorial Authorities (TAs) have a District or City Plan. Those instruments lower in the hierarchy are generally required to either give effect to, or not be inconsistent with, the provisions of those above.

Within the RMA framework, planning instruments control land use activities, and may impose restrictions and conditions to prevent, remedy or mitigate the adverse effects of those activities. The spread of wilding conifers is a potential effect of the land use activity of planting and growing introduced conifer trees. Through controls on this land use activity, planning instruments have the potential to both prevent new sources of wilding conifers being planted, and/or to prevent, or at least mitigate the extent of, wilding conifers spreading from new conifer plantings. However, this potential relies upon planning instruments specifically addressing land use activities involving the planting of exotic conifers, as there is a default presumption within the RMA that land use activities are permitted *unless* a planning document prescribes otherwise[1].

The approach taken at the District Plan level is therefore most directly relevant to wilding conifer management and prevention, although a Regional Policy Statement can provide high-level guidance. District Plans can address matters such as - determining high risk situations for new forestry plantations and other tree planting using introduced conifer species; restricting or prohibiting the planting of species known to have a high spread risk in certain locations; and addressing potential wilding conifer spread risk, impacts and management as part of the assessment process for relevant resource-consent applications.

[1] Section 9 RMA

The National Environmental Standard for Plantation Forestry (the NES-PF) was introduced in 2017, with the overarching objectives being to maintain or improve the environmental outcomes associated with plantation forestry activities, and to increase the efficiency and certainty of managing plantation forestry activities. A key driver for the NES-PF was the variability in the way that forestry activities were addressed and managed through Regional and District Plans across the country. The NES-PF aims to establish more consistency and a risk-based approach to the management of the environmental effects of forestry activities.

The NES-PF addresses eight core forestry activities. The two that are relevant in the context of wilding conifer management are afforestation and replanting. Both activities are provided for as a permitted activity if prescribed conditions are met. The permitted activity condition of most relevance to wilding conifers is the required application of the Wilding Tree Risk Calculator (WTRC) and a resulting score of <12. A score of 12 or more means resource consent is required[2].

As the NES-PF takes precedence over local authority plans, it has had a direct impact on District Plan land use provisions relating to afforestation. Any provisions that duplicate or conflict with the NES-PF must be deleted or amended, and more stringent rules are allowed in only limited circumstances[3].

The NES-PF only applies to 'plantation forestry', which excludes plantings of <1ha, shelterbelts, or forests not intended to be harvested. For conifer plantings outside the ambit of the NES-PF, land use provisions of District Plans (and any relevant provisions of Regional Plans) continue to apply.

BIOSECURITY ACT 1993

BSA → NPD → NPMP / RPMP

The BSA underpins New Zealand's biosecurity system. For pests and diseases that become established in New Zealand, the BSA provides for national or regional pest management plans and/or pathway management plans to manage the impacts of pests on economic, environmental, social or cultural values. Typically, national pest management plans (NPMPs) have been developed to address the management of a particular pest or disease (e.g., the American Foulbrood NPMP), while regional pest management plans (RPMPs) usually address many organisms at a regional level.

All pest and pathway management plans must be prepared in accordance with the requirements of the BSA and the National Policy Direction for Pest Management (the NPD), which was introduced in 2015 to improve the alignment and consistency of pest management plans and programmes across New Zealand.

Regional Councils have a mandate under Part 2 of the BSA to provide regional leadership in activities that prevent, reduce, or eliminate adverse effects from harmful organisms present in their region.

[2] Although for replanting, a WTRC assessment is only required if a different species is being planted, and if the previous species had a WTRC score that is the same as or higher than that of the proposed different species, it is a permitted activity.

[3] Regulation 6 of the NES-PF sets out the situations where Regional or District Plan rules may be more stringent than the NES-PF regulations. These include where: a rule gives effect to other national instruments (NPSFM, NZCPS); a rule provides for protection of outstanding natural features and landscapes, or significant natural areas; or a rule manages activities in unique and sensitive environments, including "green, yellow or orange zones containing separation point granite soils areas", geothermal areas, karst geology, or protects human drinking water sources. Regulation 13 of the NES-PF also prevents afforestation in visual amenity landscape areas if the local Plan restricts plantation forestry within such landscapes.

Although RPMPs are not mandatory, all Regional Councils currently have one as part of giving effect to this regional leadership function. RPMPs set out the management programmes for organisms specified as pests in the region and include both regulatory and non-regulatory mechanisms to achieve the objectives of the programmes. Some Regional Councils also have Regional Pest Management Strategies, which are non-regulatory instruments that generally outline the broader regional approach to biosecurity and pest management, of which the RPMP forms the primary regulatory component.

Specifying an organism as a pest in a pest management plan has two important statutory consequences. The first is that ss52 and 53 of the BSA are triggered in relation to that organism. These sections prohibit any person from propagating, selling, distributing, breeding, communicating, releasing, or otherwise spreading the organism. The second is that the management agency is then empowered to exercise a range of advisory, service delivery, regulatory and funding powers available under the BSA to achieve the objectives specified for that organism in the plan.

In the context of wilding conifer management, pest management plans can: prevent some new sources of wilding conifers (by specifying certain conifer species as pests, thereby prohibiting any new plantings of those species); and reduce the extent of existing wilding conifers, and prevent the establishment of new wilding conifers (by undertaking wilding conifer control programmes and/or enforcing rules requiring landowners to clear wilding conifers on their land).

CLIMATE CHANGE RESPONSE ACT 2002

EMISSIONS TRADING SCHEME

The Climate Change Response Act 2002 (the CCRA) establishes the Emissions Trading Scheme (the ETS) and provides the legal framework for the inclusion of forestry in the ETS. A new 'permanent post-1989 forest' category in the ETS has been developed, and this will come into effect in January 2023. This new development, as well as the original inclusion of forestry in the ETS, have an impact on wilding conifer management insofar as they create an incentive for increased conifer planting, which in some areas can lead to increased risks of new wilding conifer spread.

The ETS has also had an impact on wilding conifer control programmes due to challenges associated with areas of wilding conifers that have essentially become forests. Some of these areas were originally registered in the ETS, while some were automatically included as pre-1990 forests, meaning that liabilities would have to be paid if these areas were cleared. Subsequent amendments to the ETS, including the introduction of a 'tree weed exemption' for the deforesting of areas of tree weeds, and changes to the eligibility for wilding conifer forests to be registered in the ETS have gone some way to assisting with some of these challenges. However, some areas of wilding conifers remain registered in the ETS, and new applications for registration can still be made if there are no RPMP obligations and the risk of wilding conifer spread is assessed to be low.

CLIMATE CHANGE COMMISSION RECOMMENDATIONS

The establishment of the Climate Change Commission (the CCC) is given statutory effect via the CCRA. The CCC recently released its first recommendations report to the government. The recommendations within this report are likely to have a significant influence on central government policy settings.

The CCC report addresses the direction of policy relating to forestry and tree planting in Recommendation 25[4]. The key message underlying Recommendation 25 is the need for a shift away from the current reliance on exotic forests as a primary tool to meet emissions reduction targets, to a focus on prioritising the stopping of emissions at source, and more strategic management of forests as a long-term carbon sink. The CCC report signals that although exotic forests will continue to play a role in CO^2 removal in the shorter term[5], there should be a significantly increased focus on the expansion and protection of native forests to create an enduring carbon sink.

The points from within Recommendation 25 of most direct relevance to wilding conifer management are those that relate to exotic forests. These are:

> Designing a package of policies to reduce reliance on forestry removals and manage the impacts of afforestation including:
>
> a. Amendments to the ETS to manage the amount of exotic forest planting driven by the scheme.
> b. A clear position on the role and desirability of different types of permanent exotic forests as carbon sinks, and amending the ETS and other policies accordingly.
> c. Land-use planning, direction and tools to help local government manage afforestation, mitigate localised impacts of afforestation and to achieve environmental co-benefits.

OTHER CENTRAL GOVERNMENT POLICIES, PROGRAMMES, INITIATIVES AND STRATEGIES

Overseas Investment in Forestry

Changes to Overseas Investment Office processes and to the Overseas Investment Act 2005 in 2017 and 2018 respectively, introduced more streamlined tests and processes for overseas investment in forestry in New Zealand. These measures aimed "to encourage foreign investment in the forestry sector"[6].

Tree Planting Programmes

There are several national programmes and initiatives that have an impact on wilding conifer management and prevention in that they promote or incentivise tree planting. When this involves exotic conifers, it can give rise to increased risks of new wilding conifer spread. Examples include the One Billion Trees programme (1BT) and Permanent Forest Sink Initiative (PFSI). 1BT promoted the planting of both exotic and native trees, both for production purposes and as permanent forests, but is currently closed to further funding applications and it is unclear what the future of this programme is. The PFSI incentivised the establishment of permanent forests (both exotic and native) in exchange for NZ Units, which forest owners are then able to sell to parties wishing to offset emissions. The PFSI was discontinued from late 2018 and will essentially be replaced by the new 'permanent post-1989 forest' category in the ETS from January 2023.

[4] Ināia tonu nei: a low emissions future for Aotearoa, He Pou a Rangi Climate Change Commission, May 2021, pg 323.
[5] The CCC signals an average of 25,000ha per year of exotic forestry planting up until 2030, or around 380,000ha of new exotic forestry from 2021-2035.
[6] Phase 2 Overseas Investment Act Reform Information Release (treasury.govt.nz)

New Zealand Wilding Conifer Management Strategy and National Wilding Conifer Control Programme

The development of the NZ Wilding Conifer Management Strategy 2015-2030 (NZWCMS) was led by MPI in collaboration with a multi-stakeholder working group. The Strategy establishes a shared vision – 'the right tree in the right place' – and an overarching aim of preventing the spread of wilding conifers and containing or eradicating established areas of wilding conifers by 2030.

The NZWCMS is a key driver behind a number of initiatives relating to wilding conifer management, including - research and development around control tools and methodologies, improvements in the consistency and effectiveness of regulatory components of RPMP wilding conifer management programmes, and the establishment of the National Wilding Conifer Control Programme to deliver prioritised and coordinated wilding conifer control across the country.

The significant increase in Crown funding allocated to the National Control Programme through Budget 2020 ($100M over 4 years) signals a strong central government recognition of the importance of effectively addressing wilding conifer spread and represents a significant public investment in the issue.

Legislative and System Reviews

Several significant reviews are also relevant. A review of the RMA and associated framework and systems is currently underway, and a review of the BSA was announced in 2019. Government is also considering the recommendations from the CCC report and what changes, and initiatives will be required to implement those. A Year 1 review of the NES-PF was completed in mid-2020, and forestry Ministers have advised that the key findings of this will be considered within the Government's response to the CCC report and the wider RMA reforms

These reviews and potential associated changes are likely to impact on the policy, statutory and regulatory framework relevant to wilding conifer management, although it cannot currently be determined in what way or to what extent.

TABLE 1: STATUTORY AND REGULATORY FRAMEWORK RELATING TO WILDING CONIFER MANAGEMENT AND PREVENTION

	Statutory & Regulatory mechanisms			Policy settings / Programmes
	Resource Management Act 1991	Biosecurity Act 1993	Climate Change Response Act 2002	
National Level / Central Govt	National Policy Statements	National Policy Direction for Pest Management	Emissions Trading Scheme Climate Change Commission	Tree planting programmes e.g., 1 Billion Trees programme, Permanent Forest Sink Initiative, new 'permanent forest' category in ETS from 2023 Climate Change Commission recommendations RMA and BSA reforms NZ Wilding Conifer Management Strategy 2015-2030 National Wilding Conifer Control Programme
	National Environmental Standards National Environmental Standard for Plantation Forestry 2017 (NES-PF)	National Pest or Pathway Management Plans		
Regional Level / Regional & Unitary Councils	Regional Policy Statements	Regional Pest Management Plans Regional Pathway Management Plans		Regional Biosecurity Strategies Non-regulatory wilding conifer control strategies and programmes Contestable funds for wilding conifer control
	Regional Plans			
District Level / Territorial Authorities	District Plans			

SECTION 2: THE CHALLENGING CHARACTERISTICS OF WILDING CONIFER SPREAD

Project Task 2
Summarise the key characteristics of wilding conifer spread that create fundamental challenges and limitations for the policy, statutory and regulatory framework.

There are a number of key characteristics about wilding conifer spread that contribute to the challenges and limitations for the current policy, statutory and regulatory framework to effectively address the problem. These are set out below:

- Conifers can be both a pest and a valuable resource.
  Some conifer species have now been declared pests in many regions. Historically, these species were valued for timber production or functional purposes such as erosion control. Some other conifer species remain highly valuable when grown and managed for commercial purposes but can be spread-prone and cause significant wilding spread. The commercial value of these species when planted makes management of wildings particularly challenging, as the valuable planted form can be a source of the pest wilding form.
- Managing planted sources is complex.
  Wilding conifers originate from planted conifer trees that were usually planted legally and have an economic or functional purpose. Source trees can range from individuals planted as specimen trees, to shelterbelts, to entire plantations. These trees can be a source of wilding spread for many decades. Preventing this spread, ultimately means the removal of these source trees. However, being legally established and having economic or functional value means there can be significant challenges to achieve this. In some instances, removal may take a long time, and in others, removal may simply not be feasible. Consequently, control of wilding spread from planted source trees can be required over the long-term. This can impose significant costs on other parties 'receiving' the wilding spread on their land.
- Wilding conifer spread is variable and can occur over long distances.
  Most wilding spread occurs within 200m of the source tree. This is referred to as "fringe spread". Although fringe spread is predictable, 200m is a considerable distance, meaning 'buffer distances' to effectively mitigate spread to adjoining properties can have an impact on the productive capacity of properties.
  Longer distance spread, over multiple kilometres also occurs. Long distance spread can be highly variable over time and in terms of distance and direction, as it occurs when windy conditions coincide with seed release. This can make it difficult to predict or control. Long-distance spread results in scattered wilding trees, sometimes over very large areas, and is referred to as "outlier spread".
- Wilding conifer effects are cumulative.
  The impact of a handful of wilding conifers may be minimal, but the cumulative impact of wilding conifer spread from source trees and forests over their reproductive life, can be significant and extensive. And if wilding conifers are not removed before they reach coning age, they then produce further wilding conifers.
- Wilding conifer effects are delayed.
  Conifer species can take 5-10 years to reach reproductive maturity. This means a significant lag phase between the initial planting and any observable evidence of wilding conifer spread. There

are even further delays before the effects of wilding spread become apparent, as effects are cumulative, building over years as wilding density increases.
The effects of fringe spread tend to become apparent within several years of trees reaching coning age, as this is where most seed falls, and this spread usually occurs annually as it is not reliant on wind events. Because of the variability and scattered nature of outlier spread, it can be many years before effects become apparent. This means that preventative and early action is expensive, and therefore less likely to occur, because such large areas require surveillance and monitoring. This in turn means that by the time a wilding problem becomes apparent, it may have become extensive and very costly to address, as wilding conifer spread and costs to address it increase exponentially if early action is not taken.
This characteristic also means that for new conifer plantings, an adaptive management approach to on-site factors such as buffer distances, siting of planting, or species planted, is impractical given that it could be 5-10 years before wilding spread occurs and even longer for effects to be apparent, by which time the primary investments have been made and the land use activity is well established.

- Wilding conifer spread occurs across property boundaries.
  Like many pests, wilding conifers naturally spread from one property to another, whether from mature wilding conifers or from planted conifers. Conifer seed can also spread over long distances, so wilding spread can occur well beyond just adjoining properties. Applicable statutory frameworks are constrained by property law, meaning regulation under the RMA or BSA cannot authorise or require the owner of source trees to access another person's property to monitor or remove wilding conifers.
- Wilding conifer spread can impact on a wide range of values.
  Wilding conifer spread can have significant impacts on ecological, cultural, heritage, landscape, amenity and productive values. These effects occur on public and private land, across a wide range of landscapes and 'types' of land, and are not limited to conservation land, or to areas that are formally identified as "outstanding" or "significant".
- Factors that mitigate wilding spread can quickly change.
  The extent and speed of wilding conifer spread is often strongly linked to land use. This means that land use change can have a significant impact, e.g., destocking and land 'retirement' can significantly increase wilding conifer spread, while intensification of land use can considerably reduce it.

SECTION 3: NATIONAL ENVIRONMENTAL STANDARDS FOR PLANTATION FORESTRY

Project Task 3
Review of the Report on the Year One Review of the National Environmental Standards for Plantation Forestry[7]

The National Environmental Standards for Plantation Forestry (NES-PF) came into force in May 2018. The NES-PF addresses 8 core plantation forestry activities, enabling these to be carried out as permitted activities, subject to prescribed conditions. When the conditions are not met, resource consent is required. The core forestry activities that are relevant from a wilding conifer management perspective are Afforestation and Replanting[8].

The NES-PF applies to any forest of at least one hectare that has been planted specifically for commercial purposes and will be harvested. Notably, the NES-PF does not apply to permanent conifer forests where there is no intention to harvest.

The NES-PF prevails over district or regional plan rules except where it specifically allows more stringent plan rules. The NES-PF allows more stringent district or regional plan rules in only limited circumstances[9].

The Year One Review of the NES-PF (the review) began in May 2019, was completed mid-2020, and made public in May 2021. Government has indicated that it will consider the key findings of the review within its response to the Climate Change Commission's recent recommendations, and the wider RMA reforms that are currently underway.

SUMMARY OF ISSUES IDENTIFIED BY YEAR 1 REVIEW OF NES-PF

Project Task 3:
a) Summarise the issues/gaps/shortcomings identified by the review that are relevant to wilding conifer management and prevention, including associated recommendations.

Section 4 of the review report addresses the provisions relevant to wilding conifer management. This section raises a considerable number of important and valid issues relating to wilding conifers and the NES-PF. Six issues relating to the settings and application of the Wilding Tree Risk Calculator (WTRC) are identified, plus six issues relating to the policy settings relevant to the wilding conifer provisions, as well as several issues outside the scope of the NES-PF, specific to wilding conifer management. A summary of these issues is set out below.

[7] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021.
[8] Addressed in Part 2 subpart 1 and subpart 8 of the NES-PF respectively.
[9] Circumstances include where: a rule gives effect to other national instruments (NPSFM, NZCPS); a rule provides for protection of outstanding natural features and landscapes, or significant natural areas; or a rule manages activities in Separation Point granite soils, geothermal areas, karst geology, or protects human drinking water sources.

Issues Related to the WTRC Settings

- The WTRC is underpinned by criteria that can be subjectively applied
- The WTRC underestimates Douglas Fir spread risk in some areas
- The WTRC does not provide score reduction for lower-risk alternative species
- Surrounding land use can change over time

a) The WTRC is underpinned by criteria that can be subjectively applied.

The WTRC can be complicated to apply as several of the criteria are subjective in nature, require expert knowledge to assess, or are subject to change over the lifecycle of a plantation forest. This can result in inconsistencies at a regulatory level, where a high degree of certainty regarding wilding conifer risk mitigation is important.

b) The WTRC underestimates the spread risk of Douglas fir in some areas.

Douglas Fir wilding spread risk is lower in wetter areas, and the WTRC allows for a lower score (1) in such areas. However, it does not provide any independent criteria to determine whether an area is 'high moisture' for the purpose of the calculator. Consequently, an assessment may be made in good faith during wetter years where risk appears low, but over the 45-year life of the forest this may not adequately reflect drought and therefore wilding risk in a warming climate.

c) The WTRC does not provide score reduction for lower-risk alternative species.

Until research provides a better understanding of the wilding spread risk profile of potentially lower-risk hybrid conifer species, afforestation with species not listed on the WTRC requires a resource consent. This is a precautionary approach but may act as a disincentive to the use of hybrid species.

d) Surrounding land use can change over time.

The nature of surrounding land use is a key factor in the wilding spread risk assessed under the WTRC. However, the calculator only allows for an assessment of surrounding land use as it exists at the time of assessment. Surrounding land use may change during the plantation forestry cycle and this can increase wilding spread risk, as existing mitigations, such as grazing patterns, may change.

Issues Related to Application of the WTRC

- Documentation requirements of the NES-PF do not provide confidence in the WTRC assessment
- The definition of a 'suitably competent person' is insufficient

a) NES-PF documentation requirements do not provide confidence in WTRC assessment.

The NES-PF requires foresters to provide a copy of the WTRC score to councils but does not require provision of additional documentation outlining how the assessment was undertaken. This can make it difficult for councils to confidently assess site risks and/or permitted activity compliance. Providing more detailed assessments may assist councils to understand the risk management approach being taken.

b) The definition of a 'suitably competent person'[10] is insufficient.

Assessment of wilding spread risk can be complex and relies on the assessor having good knowledge of the site over time, or the experience to understand what additional information is required to understand the site, and where to find it. Silviculture experience alone may be insufficient to guarantee a good understanding of site-specific wilding risk, particularly if the experience was gained overseas or in parts of New Zealand with different conditions.

The suitably competent person is providing evidence to support a permitted activity land use over many years, so all parties should be able to have a high level of confidence in the assessor's abilities. Furthermore, some councils lack staff with the knowledge and experience to assess wilding spread risk scores, making the expertise of assessors even more important.

Policy Settings Relating to Wilding Conifers

The review indicated that the policy intent of the wilding conifer provisions of the NES-PF to permit plantation forests where the wilding risk is low or can be managed appropriately is effective and does not need to change. However, it identified that there are several ways in which the settings in the NES-PF and the WTRC are not giving effect to this intent, as well as some risks that are not currently managed appropriately. Issues related to policy settings include:

- Permitted activity threshold
- Inability to authorise or require control of wilding spread on neighbouring properties
- Settings misaligned for replant
- Notification periods are too short
- Process for challenging a score is not straightforward
- Site-specific assessment could be aided by reference to known high-risk areas

a) Permitted activity threshold.

In terms of wilding spread risk, the threshold for resource consent under the NES-PF is a WTRC score of 12 or more. This does not necessarily mean that trees should not be planted, but a resource consent (if granted) can require that additional mitigations be applied. The NES-PF does not specify that a score lower than 12 equates to low risk. Some consider scores over 9 of concern because they rely on assessed conditions (i.e., surrounding and down-wind land use and vegetation cover) remaining static over a long period.

b) Controlling wilding spread on neighbouring properties can't be authorised through a permitted activity.

The NES-PF cannot grant access to or require a person to undertake work on, a property not owned by that person. Consequently, the only requirement under the NES-PF to remove wildings is limited to properties under the same ownership as the source forest. Similarly, there is no requirement for owners of forests established as a permitted activity under the NES-PF to manage spread and remove trees from other properties.

[10] The NES-PF requires that the WTRC score must be calculated by a "suitably competent person", which is defined as a person with –

(a) tertiary qualifications in silviculture and forest ecology and at least 2 years' experience in the field of silviculture; or

(b) at least 5 years' experience in silviculture that includes forest establishment.

Similarly, under the BSA and Regional Pest Management Plans, MPI and regional councils can require landowners to remove wilding trees from their properties, but they cannot require the owner of trees that are the source of wilding spread, to remove wildings from property they do not own.

Although agreements with neighbouring landowners can be used to ensure that wilding spread is addressed on neighbouring land, these rely upon all parties being willing, and given the long cycle of plantation forests, can be subject to changes in relationships and ownership.

c) Settings misaligned for replant.

Wilding conifer control is treated differently between the afforestation and replant provisions in the NES-PF because the activity of replanting a forest has traditionally had existing use rights. If replanting with a different conifer species, the same wilding calculator requirements must be met. Except for this difference, the intention was to treat the activities in the same way.

However, regulation 79(6), which requires the removal of wildings from within SNAs and wetlands, does not include any property limits as are included in regulation 11(5). Because a permitted activity cannot authorise an activity on another person's property the provisions in regulation 11(5) need to be duplicated in regulation 79 so the intent (and limits to) the regulation are clear.

d) Notification periods are too short.

One of the NES-PF permitted activity conditions for afforestation is the requirement that written notice must be provided to regional and territorial councils between 20 and 60 working days before afforestation is planned to begin. The WTRC score for the proposed afforestation must be provided at the same time, though the WTRC assessment can be carried out up to 6 months before.

This short notice period means that any dispute over the WTRC score or querying of permitted activity compliance will occur at a point after most investment decisions (e.g, ordering seedlings) relating to the afforestation have been made. This potentially puts councils in the difficult position of needing to question a score and potentially require resource consent for a planting programme that has already been invested in and is ready to begin.

e) Process for challenging a score is not straightforward.

The legal process for a council to query a purported permitted activity score of less than 12, is limited. A council officer could question the score informally, but if the score remains contentious, the only legal option is to serve an abatement notice. This is a relatively significant compliance exercise, and it introduces potential uncertainty, delay, and cost for both parties. Many Councils have operational policies that limit abatement notice action to situations where significant immediate concern exists. Given that wilding conifer risk assessment is considering a future possibility of adverse environmental effects, it may be difficult for some Councils to justify abatement notice action. This undermines the integrity of the WTRC permitted activity condition.

f) Site-specific assessment could be aided by reference to known high-risk areas.

The WTRC includes two assessment criteria for downwind land use (grazing and vegetation cover). The criteria for downwind vegetation are descriptive of cover type, but do not include a requirement to consider the value of that cover, such as high conservation value.

Implementation Support

The review identified that guidance and training are needed to ensure that improved environmental outcomes and efficiency from plantation forestry activities (as intended by the NES-PF) do in fact occur. It also identified that more data and evidence are required to ensure appropriate guidance and training can be developed.

"Feedback from councils and the forestry sector is that they need support to ensure the NES-PF is well understood and can be consistently and effectively implemented. This is most needed where councils lack capacity and experience with forestry activities, and for foresters who lack experience in identifying and managing environmental risks associated with plantation forestry."[11]

Consistency With One Billion Trees Programme

Section 12 of the review considers consistency of the NES-PF with the One Billion Trees programme (1BT). The review concludes that specific changes to the NES-PF are not required in relation to the 1BT programme. It clarified that permanent forests (not for harvest) are not covered by the NES-PF and noted that the gaps in the regulations relating to wilding tree risk identified in Section 4 of the report "…are also likely to apply to non-plantation forest plantings if councils do not have rules managing the environmental effects of non-plantation forest plantings."[12]

Matters Outside the Scope of NES-PF

The review noted several matters relevant to wilding control that are outside the scope of the NES-PF. These include:

- Greater alignment between the NES-PF, councils, the forestry and farming sectors, and the National Wilding Conifer Control Programme would help to ensure that the limits of regulation do not leave gaps in control and prevention efforts, while maintaining the beneficial aspects of forestry.
- New entrants to the forestry sector may have less understanding of wilding risk than more established parts of the sector. This may mean there is more call for both private and council wilding assessments. It is not known what effect this is having in the private sector, but it is increasing pressure on council staff to process consents and provide opinions on the suitability of planting proposals.
- The NES-PF was not designed to cover forests that are intended to be planted solely for permanent carbon sinks. Councils retain the ability to make rules in relation to this type of afforestation. However, there is a level of confusion about the regulatory controls of permanent carbon forests, and clarification over the scope of the NES-PF in this regard would be helpful.

[11] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 68.
[12] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 60.

Review Recommendations

There are no specific recommendations within the review report. The summary of review findings indicates that some changes could be made to improve environmental outcomes in some areas and further implementation support for councils and the forestry sector is required. These are quite general statements and even those directly relevant to wilding conifers are relatively general –

- guidance and training to improve compliance with wilding conifer controls; and
- changes to the WTRC to adjust some of the settings in the calculator, align how afforestation and replanting are treated and strengthen the requirements about who is qualified to use it.

A more specific indication of what some of the changes could include, can be found within the consideration of the different issues addressed in Section 4. These include:

- Potential amendment of permitted activity condition requiring notice and WTRC score, to clarify what is required as a minimum standard of wilding risk assessment, and to require the provision of supporting documentation.[13] This may assist in improving the quality of assessments and providing greater confidence for councils when assessing risks and permitted activity compliance.
- Consideration of a more precautionary wilding conifer spread risk permitted activity threshold.[14] This is indicated in relation to the inability of the NES-PF to require wilding conifer control on neighbouring properties, as well as in relation to the potential for nearby and downwind land use to change, and therefore change wilding spread risk, during the forest rotation period.
- Amend replanting controls so that they align with those for afforestation, to provide consistency in the policy intent and clarity in the land-use obligations. This may mean a change to existing use rights, and may increase control, which would decrease the cost of preventative measures over time.
- Suggestion that a geospatial layer showing areas of current wilding conifers could be aligned with areas of high conservation value to provide more information about downwind risk.[15]
- Clarification that the NES-PF does not cover exotic plantations that will not be harvested, such as permanent 'carbon forests', and that such forests remain within the authority of councils, including wilding risk and other environmental effects.

In terms of next steps, the review report indicates that the "report and its findings will be considered by Forestry Ministers in order to make decisions on the next steps."[16]

[13] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 12.
[14] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 13-14.
[15] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 15.
[16] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 68.

ADDRESSING ISSUES AND LIMITATIONS OF THE NES-PF

Project Task 3:
b) Provide advice on the key recommendations and/or issues identified through the review that the Wilding Pine Network could support and/or seek to have addressed.
c) Identify any additional issues or gaps associated with the NES-PF that are relevant to the Wilding Pine Network's two issues of concern, including options or arguments for change.

Section 4 of the review raises important and valid issues relating to wilding conifers and the NES-PF. These issues highlight some significant weaknesses in the current settings which create a real risk that afforestation and replanting may, in some parts of the country, result in unmitigated wilding conifer spread in the future. This directly impacts on the Wilding Pine Network's 2 issues of concern, potentially risking reinvasion of cleared areas, and the imposition of externality costs on other parties.

Addressing the issues raised in the review is vital to improving the way the NES-PF addresses the wilding conifer impacts of afforestation and replanting, and initiatives to do so should be supported. However, more substantial change than is apparent from the findings of the review is necessary if the risks of new afforestation and replanting projects generating future legacy wilding conifer problems are to be addressed to the full extent possible within the NES-PF framework.

Consequently, the Wilding Pine Network should consider advocating to relevant central government agencies for urgent changes to the wilding conifer related parts of the NES-PF to ensure a more precautionary approach to afforestation and replanting, with better opportunities for more robust and thorough assessment of wilding conifer spread risk and the application of effective and ongoing prevention and mitigation measures.

The areas of change listed below, some at a broader level and some more specific, are suggested as those that the Wilding Pine Network should consider focusing on. More detail relating to the broader issues of a more precautionary approach and the use of the WTRC within the NES-PF is provided in subsequent sections.

1. A more precautionary approach to afforestation and replanting proposals should be taken. Afforestation and replanting should be distinguished from other forestry activities. The effects and risks of wilding conifer spread are fundamentally site-specific and depend on the nature of the surrounding environment, as well as potential future changes in the surrounding environment. Wilding conifer effects are also cumulative and persist for the life of the initial source plantings, and beyond, if not managed. The current 'legacy' wilding conifer problems clearly illustrate what can occur when a precautionary approach is not taken, and when mechanisms to ensure responsibility for effectively mitigating and managing the wilding spread effects of conifer planting are not implemented at the time of planting. A standardised, permissive approach in a regulatory environment that is unable to require or authorise subsequent remedying or mitigating of externality wilding conifer effects, is inappropriate, and generates risks of new legacy wilding conifer issues establishing. Consideration should be given to making controlled activity status the starting point for both afforestation and replanting.
2. If a more precautionary approach is not taken to afforestation and replanting under the NES-PF, consideration should be given to allowing District Plans to take a more stringent approach to these activities for the purposes of managing the effects of wilding conifer spread on the values of the local environment.

3. A WTRC score should not be used as a permitted activity condition. In its present form, the WTRC is an inappropriate mechanism to be used as a determinative factor in a regulatory context. Although it is a useful tool for afforestation planning, and to inform both foresters and consent authorities about potential wilding conifer spread risk and potential mitigation measures, it is not an appropriate mechanism to determine, for example, RMA activity status. More certain, objective criteria should be used to determine activity status.
4. If the WTRC continues to be used under the NES-PF the following urgent changes should be made:
    a. Notice periods for notice of proposals and provision of WTRC scores should be extended so that there is sufficient time for councils to effectively audit WTRC assessments and ensure permitted activity condition compliance is thorough and robust.
    b. The provision of documentation and evidence to illustrate the basis for a WTRC score and assessment should be required. This is a fundamental change needed, given the subjective and evaluative components of a WTRC score. It would help ensure that regulators are able to properly audit the WTRC assessment for permitted activity compliance, and to understand important site-specific factors that may contribute to, or mitigate, the risk of wilding spread. This should also include requirements regarding evidence of long-term weather and climatic conditions in the case of using a reduced score for a particular species. The limitations with just providing the WTRC score sheet are illustrated in this statement from the review report:

        > "We also considered a small number of Wilding Tree Risk Calculator scores, but it is almost impossible to draw conclusions from paper-based scores without making site visits..."[17]

    c. Criteria for determining who is a 'suitably competent person' for the purposes of applying the WTRC should be amended to be more robust and specific, and consideration should be given to requiring a level of independence in this regard.
5. If a WTRC score continues to be used in a determinative manner (e.g., to determine activity status), either changes to the WTRC to address the level of subjectivity and the influence of changeable indicators should be sought, or only the objective indicators should be used. Alternatively, work to further develop the WTRC, to make it more appropriate for use in a regulatory context, should be undertaken.
6. A notice requirement, including the provision of any necessary WTRC score and supporting evidence and documentation, should be included as a permitted activity condition for replanting proposals. For replanting, there are no notice conditions, except for a requirement to provide the WTRC score sheet *if requested*. It is difficult to see how councils will be aware of replanting proposals and therefore in a position to request the WTRC score sheet if there are no notice requirements. WTRC scores (and supporting information) are central to determining whether replanting with a different species is a permitted activity. A notice requirement is therefore necessary to ensure at least a basic assessment of permitted activity compliance can be made. This is particularly important given the issues and limitations associated with the WTRC.
7. The current setback requirements in the NES-PF, which are permitted activity conditions, do not adequately mitigate wilding conifer spread. A 200m setback can provide effective

[17] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 10.

prevention and mitigation of a considerable proportion of off-property wilding conifer spread for most species[18]. Increasing the permitted activity setback conditions to 200m should be considered.

8. Potential confusion and a lack of clarity about regulatory management of permanent (i.e., no intent to harvest) forests should be urgently resolved.
   The NES-PF does not currently apply to afforestation and replanting proposals where there is no intent to harvest. The review identified that this may not be widely understood by District Councils, which remain responsible for management of these activities. As a minimum, all territorial authorities should be advised by central government of this potential gap in the regulatory framework.
   The pace and scale at which new afforestation is occurring in some areas means there is a high risk that unmitigated wilding conifer spread is going to result, given the lack of precaution in the current NES-PF settings, as well as the potential regulatory gap for permanent afforestation proposals. If changes to the afforestation and replanting settings of the NES-PF are made, implementing a more precautionary approach, and addressing the issues associated with the WTRC, consideration should be given to extending the ambit of these parts of the NES-PF to cover forests not currently covered by the 'plantation forest' definition, such as permanent 'carbon' forests.
   Further detail about this potential regulatory gap, as well as potential ways to address it, are set out in Section 4 of this report.

A More Precautionary Approach to Afforestation and Replanting

Context

There are some important contextual factors that should be kept in mind when considering the need for changes to the NES-PF settings related to wilding conifer management.

Firstly, it is important to note that the "NES-PF was developed during a time when net deforestation was occurring, and well before the One Billion Trees programme and reforms to the Emissions Trading Scheme. Those programmes have significantly changed some of the incentives for forest planting and attracted new entrants to the broader forest sector."[19] Since then, there has been an accelerating volume of new afforestation taking place.

The Climate Change Commission has also since released its recommendations report[20] to government. One of the key elements of the forestry-related policy direction in the report is to reduce the current reliance on forestry carbon removals and to ensure the impacts of afforestation are managed. The report acknowledges that exotic production forestry continues to have a role to play in removing carbon dioxide, particularly in the shorter term. However, it indicates that under its recommended scenarios, the 2050 targets could be met with a significantly smaller area of new exotic forestry than would occur under current policy settings.

[18] "In general, most seed falls close to the parent tree resulting in wilding conifers close to stand boundaries and forest edges. Such close seed fall can occur along any stand edge independent to the main wind direction and up to a distance of 200m (Ledgard, et al., 1999). Therefore fringe spread need to be assessed in a buffer of 200m around any intended planting site." from Glossary section of Guidelines for the use of the Decision Support System "Calculating Wilding Spread Risk From New Plantings", T.S.H Paul, SCION, June 2015, page 19.
[19] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 1.
[20] Ināia tonu nei: a low emissions future for Aotearoa, He Pou a Rangi Climate Change Commission, May 2021.

The following list summarises key elements of the afforestation and wilding conifer context, which are also useful to keep in mind. (Note – these have been identified by the author and are not drawn from the NES-PF or the Year 1 Review of the NES-PF).

- A land use activity that will persist for at least 20, and up to 30+, years.
- A possible, and in some circumstances a likely, adverse effect (wilding conifer spread) with the potential to occur annually for at least 10, and up to 20+ years, cumulatively increasing in scale and extent if not remedied or mitigated.
- A potential adverse effect that will occur predominantly on property in other ownership, and which may be nearby or kilometres distant.
- A statutory and regulatory framework unable to require or authorise the resource user (forest owner) to remedy the effects of their land use activity on property in other ownership.
- A potential adverse effect that affects a range of production, recreation, amenity, and environmental values, and that can be expensive to remedy, with costs increasing exponentially with time.
- A potential residual risk of adverse effects, even if mitigation measures are taken (due to long-distance spread).
- A $100M+ public investment in addressing today's 'legacy' wilding conifer problems caused by:
    - A lack of precaution concurrent with past incentivisation of conifer afforestation
    - A lack of effective, robust, and on-going prevention and mitigation measures required at the time of afforestation
    - A lack of early action to control un-mitigated spread

DISTINGUISHING AFFORESTATION AND REPLANTING FROM OTHER FORESTRY ACTIVITIES

One of the objectives of the NES-PF was to increase the efficiency and certainty of managing plantation forestry activities. This was a key driver of the standardised and enabling approach taken under the NES-PF. However, there are several reasons why afforestation and replanting should be addressed in a more precautionary way than other forestry activities.

The other forestry activities addressed under the NES-PF can all be monitored while they are being undertaken. Most have relatively direct effects which can also be monitored, and breaches of permitted activity or resource consent conditions can generally be ascertained quite quickly. Most of these activities can be stopped and/or adapted to prevent, mitigate, or remedy effects. It is relatively straightforward for powers and controls under the RMA to be exercised in relation to these activities.

Managing wilding conifer spread effects of afforestation or replanting is a completely different proposition. Afforestation is, arguably, the most fundamental of the different forestry activities in terms of long-term impacts on the local environment. This is the starting point, which establishes the change in land use that will then persist for at least 20 years, and potentially, in perpetuity. Wilding conifer spread does not occur until trees are 8-10years old, but it will then not only persist for the life of the forest but will cumulatively grow in scale and extent if it is not managed. This means a significant delay between the activity (planting) being undertaken, effects beginning to occur, and the extent and significance of effects becoming apparent. By this stage the investment has been made, the land use activity is established, and stopping and/or refining it to prevent or mitigate wilding effects at this point is very difficult.

It was noted in the review that –

> "It is difficult to assess the performance of the wilding control settings in reducing spread after only 18 months. Coniferous trees typically produce their first cones at 8-10 years of

age, and there is a long lag phase where the impacts of spread are not felt for many years after initial spread occurs. This lag means it is not possible to assess what effect the NES-PF rules have had in achieving the intended purpose of reducing spread risk at afforestation."[21]

The current wilding conifer problem in many parts of New Zealand illustrates just how risky taking a 'wait and see' approach can be. Historic and current wilding conifer spread provides good evidence of what can and does occur, and of the considerable costs (both public and private) when responsibility for preventing and mitigating wilding conifer effects is not effectively addressed at the time that initial planting occurs. Robust, effective, and long-term mechanisms to ensure wilding conifer spread effects are avoided, mitigated, and remedied must be put in place at the time of afforestation or replanting because there are limited, if any, opportunities within the statutory and regulatory framework to subsequently ensure forest owners take responsibility for these externality effects of their activity. A more precautionary approach than is currently provided for under the NES-PF, will mean better opportunities to ensure that this occurs, reducing the risk of new 'legacy' wilding conifer problems arising.

PERMITTED ACTIVITY SETTINGS

The review identified that there are several ways in which the settings in the NES-PF and the WTRC are not giving effect to the policy intent of the wilding conifer provisions of the NES-PF, and that there are some risks that are not currently managed appropriately. This included: the current permitted activity (PA) threshold of a WTRC score of <12; the inability of the NES-PF (or other RMA and BSA instruments) to require wilding control on another person's property; and a lack of provision for addressing changes in wilding spread risk due to changes in nearby and downwind land use during the life of a forest. Given these factors, the review indicated that consideration should be given to a more precautionary PA threshold.[22]

When a forest is planted as a PA, with no enforceable wilding spread prevention or mitigation measures, there are very limited ways to ensure the forest owner takes responsibility for wilding spread impacts that occur on other properties. And because of the way conifer seed spreads, there are very few situations where there will be no risk of wilding spread. As acknowledged in the WTRC guidelines, even where a WTRC score of 0 is assessed, "…a small risk of unwanted spread cannot be fully excluded and 100% avoided."[23] If this is the case with a score of 0, a PA threshold of a score of up to 11, means that in many cases there may be considerably more than a "small risk" of unwanted spread. In some situations, this can have significant, long-term impacts that extend well beyond both the physical boundary and the lifetime of the proposed forest.

The WTRC guidelines also note that a small risk of wilding spread "…can be acceptable as long as owners and managers of new afforestation projects make a long-term commitment to manage fringe spread and remove outlier trees before coning age."[24]This indicates that regular monitoring of adjoining and downwind land, and the clearance of any wilding trees before coning age is an important factor in 'avoiding, remedying or mitigating' the adverse effects of afforestation and replanting activities. However, it is not possible to require this kind of mitigation as part of PA

[21] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 10.
[22] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 13-14.
[23] Guidelines for the use of the Decision Support System "Calculating Wilding Spread Risk From New Plantings", T.S.H Paul, SCION, June 2015, page 9.
[24] Guidelines for the use of the Decision Support System "Calculating Wilding Spread Risk From New Plantings", T.S.H Paul, SCION, June 2015, page 9.

conditions, or under any RMA or BSA regulatory framework. Consequently, off-property monitoring and control must be proposed/volunteered by the forest owner. There is little incentive to do so unless resource consent is required.

There are a range of often site-specific factors that influence the risk of wilding conifer spread. Some of these factors are beyond the control of the forest owner and may readily change during the life of a plantation forest, potentially changing the wilding conifer spread risk. For PA plantings (i.e., with a WTRC score of <12) the current NES-PF settings do not require consideration of the likelihood of these site-specific factors changing, or the potential impact on wilding conifer spread risk if they do change. Given the way the WTRC scoring works, there is in fact an inherent presumption that these factors will remain static.

In addition, the current settings significantly limit the extent to which the impacts of wilding conifer spread on the values of local environments can be considered. When considering adjoining and downwind land use and vegetation cover, the WTRC assessment focuses on the risk of wilding conifers establishing given the grazing regime and, essentially, the openness of vegetation cover. There is no explicit account for the values that may be present on that land and what impact wilding conifer spread could have on them. This is exacerbated by the restriction on Plans taking a more stringent approach to afforestation, other than in significant natural areas (SNAs) or outstanding landscapes or natural features (OLNFs). Many environments do not meet the criteria for SNAs or OLNFs but contain values that are vulnerable to the effects of wilding conifer spread.

Site-specific factors and the nature of the surrounding environment are highly relevant to the risk of wilding conifer spread, and to the scale and significance of its potential effects. Arguably, this means a less standardised approach should be taken. A less standardised approach is taken in relation to the effects of forestry activities on fire risk and water yield, which are not addressed in the NES-PF, and therefore may still be addressed through Plan rules and conditions. The rationale for this is that the potential effects are variable, and risks are site-specific and depend on the nature of the surrounding environment.[25] There are obvious parallels with wilding conifer effects.

Arguably, if certain, objective criteria that are a reliable and consistent indicator of likely wilding spread risk and effects can be identified, these could potentially be used to determine PA status. For example, criteria might include: particular low-risk species; topographic factors such as elevation, slope angle, ridgelines and high points; effective setbacks (e.g., 200m); no public conservation land or private covenanted conservation land adjoining. A potentially simpler, and more precautionary approach could be for controlled activity status to be the starting point, with similar criteria determining a shift from controlled to restricted discretionary or discretionary status. Controlled activity status provides foresters with the certainty that consent will be granted but enables the consideration of site-specific factors and effects, and the potential imposition of conditions to ensure wilding conifer spread effects are prevented, mitigated or remedied.

REPLANTING PROVISIONS

The NES-PF settings for replanting should also be amended to be more precautionary, given that our understanding of wilding conifer spread risk and effects has increased significantly since mature forests were originally planted. For many, there was probably nil or very limited assessment of wilding conifer spread risk or effects, and consequently, there will likely have been no prevention or mitigation requirements imposed. This does not mean that there have not been wilding conifer

[25] Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017 Plan Alignment Guidance – May 2018, Ministry for Primary Industries, Section 5.3.

effects. The current NES-PF settings for replanting, which make replanting with the same species a PA, do not take account of the extent or significance of wilding conifer effects that have actually occurred over the life of the original forest. Nor do they take account of changes in the risks of wilding conifer spread and consequent adverse effects. These changes may have arisen due to changes in nearby land use and vegetation cover since the previous trees were planted, which may mean that the potential effects of the replanting will be greater in intensity and scale.

The WTRC Is An Inappropriate Mechanism To Determine Activity Status

There are some fundamental issues associated with the WTRC that arguably make it an inappropriate mechanism to be used to determine RMA activity status.

Principles of good RMA planning practice

A principle of good RMA planning practice is that a person should be able to determine on the face of the planning document whether or not an activity is permitted, meaning that provisions within the planning document must be sufficiently certain[26]. Permitted activity conditions that are dependent upon the decision or assessment of a third party, and/or that require an evaluative judgement are not good RMA planning practice.

Under the NES-PF, the WTRC score for an afforestation proposal determines whether it is a PA or will require resource consent. Consequently, determining whether a proposal is a PA requires the engagement of a 'suitably competent' person to apply the WTRC. Establishing the WTRC score then involves a complex and subjective evaluative assessment by this third party. This assessment includes consideration of factors that may impact on wilding spread risk that are present at the time of assessment, but which may change during the life of the proposed forest.

This process involves a level of complexity, subjectivity, and potential changeability that can create inconsistencies and uncertainty at a regulatory level, making it an inappropriate mechanism to determine PA status. Furthermore, documentation and evidence to illustrate the basis for the assessment made using the WTRC does not have to be provided to consent authorities.

Subjectivity

A recent example of an afforestation proposal in a high-country environment demonstrates some of the inherent subjectivity of WTRC assessments. Parts of this proposal were assessed to have a WTRC score of >12 and therefore resource consent was required. The following extracts from the draft decision on the consent application[27] illustrate the subjectivity of evaluations undertaken when applying the WTRC, as well as the lack of any specific provision within the WTRC for values particularly vulnerable to wilding spread (e.g., conservation values).

> *"The application states the land is mob stocked by sheep, however Council notes that the altitude of much of this area is in excess of 700 metres and rises to over 980 metres. This altitude suggests that mob stocking is not feasible in parts of this seed spread area."*
>
> *"This* [public conservation] *land was … retired through a land tenure review in 2002. The tenure review identified this land as having very high natural values.*

[26] NZ Law Society letter to MPI commenting on draft NES-PF, August 2015, NES-PF consultation submissions: Others L-Z (mpi.govt.nz)
[27] Southland District Council Resource Consent 360/10/19/290

Council … does however have a concern over the grading of the downwind vegetation cover being scored at a one or two. It queries whether this should have been graded either three or four.

Council … notes that while the seed dispersal area on PCL is not classified as ONFL or SNA in the District Plan, it is an area that will most certainly receive this classification in the future. The land should therefore be offered the high degree of protection from wilding pines establishing."

In this case, because the WTRC assessments were being considered as part of a consent application, they were able to be questioned by the consent authority. However, for scores of <12, the opportunities to query or audit the WTRC assessments are limited at best, but still involve subjective judgements and factors that may change during the life of the proposed activity.

CHANGEABLE INDICATORS OUTSIDE THE CONTROL OF THE FOREST OWNER

Some parts of the WTRC are particularly problematic within a regulatory context. One of these, the surrounding land use criteria, was identified as an issue in the review. This is a central weakness of the WTRC when used within a regulatory context. Although land use, and intensive grazing in particular, can be an effective mitigation for wilding conifer spread, where land is under different ownership, the forest owner has no control over whether this mitigation occurs or not. Land use activities and grazing patterns change readily and over the life of a plantation forest such change is highly feasible. The WTRC essentially takes a 'snapshot in time' approach to this indicator, making an assessment at the time of planting, and makes no account for potential changes over the subsequent decades of the forest life.

The WTRC also includes a 'palatability score', which relates to the species proposed to be planted. In the WTRC guidelines, this is explained as "[t]he more palatable conifer species are for sheep the better the results of grazing as a tool to prevent wilding establishment, especially if seedlings are still young."[28] Palatability is a stand-alone indicator, for which a score is given, which then contributes to the overall WTRC score. However, it is difficult to see how palatability should influence a wilding conifer spread risk score independently of surrounding land use and/or ownership. If, for example, a proposed afforestation site adjoins conservation land, or land that has been retired from grazing, grazing is not going to be occurring on that land. In such a situation, it is difficult to understand the relevance of this indicator. The palatability indicator was not specifically addressed in the review, however more detailed consideration of its role and relevance when used in a regulatory context could be useful.

Both the land use and palatability indicators relate to potential mitigation of wilding spread. Where that mitigation is within the control of the forest owner and able to be enforced by the consent authority, these indicators may be relevant and useful. However, these indicators often relate to land that is in different ownership, and entirely outside the control of the forest owner, or the consent authority. In that situation, any potential mitigation provided by a particular land use or high palatability, cannot be relied upon, or enforced, and therefore should not influence a WTRC score when used in a regulatory context.

The WTRC guidelines contain useful recommendations regarding actions forest owners should take to manage and mitigate wilding conifer spread. However, if a proposal is a PA, any such recommended actions cannot be required or enforced. Furthermore, once a forest has been

[28]Guidelines for the use of the Decision Support System "Calculating Wilding Spread Risk From New Plantings", T.S.H Paul, SCION, June 2015, page 11.

planted, whether as a permitted activity or under a resource consent, there are significant limitations to both the RMA and BSA frameworks that make it very difficult to require a forest owner to actively prevent or mitigate wilding conifer spread that becomes apparent in subsequent years.

In addition to the issues and limitations of the WTRC outlined above, the review found that the lack of any requirement to provide supporting documentation to illustrate the basis for a WTRC score, the notice periods, and a lack of experience and capacity within councils all undermine confidence in the WTRC assessment as the basis for PA status. Collectively, these issues mean there is considerable risk that there will be conflicting judgements between forestry operators, consent or enforcement authorities, and other interested persons and this would be inconsistent with the NES-PF's objectives of improving the certainty of RMA processes and environmental outcomes.

USED APPROPRIATELY, THE WTRC IS A USEFUL TOOL

The WTRC is a potentially very useful tool for afforestation planning, and to inform both foresters and consent authorities about potential wilding conifer spread risks and potential mitigation measures. The WTRC guidelines contain useful recommendations regarding actions forest owners should take to manage and mitigate wilding conifer spread risk. In its current form, the WTRC would be more appropriately used as a matter that consent authorities may take into account when considering a resource consent application. Although given the issues and limitations associated with it, it should not be the only factor consent authorities can take account of when considering wilding conifer spread risk and effects.

SECTION 4: PLANTINGS OUTSIDE THE NES-PF

A POTENTIAL REGULATORY GAP

Project Task 4:
a) Outline the potential regulatory gap relating to management of conifer plantings not covered by the NES-PF

The NES-PF applies to the afforestation and replanting of "plantation forests" or "plantation forestry". These terms are defined in the NES-PF as a forest deliberately established for commercial purposes that is at least 1ha of "…continuous forest cover of forest species that has been planted and *has or will be harvested or replanted*" (emphasis added).

PERMANENT FORESTS

Although the NES-PF lists plantings that are specifically excluded from the definition of plantation forest[29], this list does not include forest plantings that are not intended to be harvested. This has the potential to create both confusion and a regulatory gap, in terms of the management of permanent or 'carbon' forests, if territorial authorities (TAs) do not understand that such forests are not covered by the NES-PF. This point was acknowledged several times in the NES-PF Review Report[30] -

> "…the NES-PF does not apply to all potential forest plantings. The NES-PF definition of a plantation forest includes the words 'for harvest', which means that permanent forests (not for harvest) are not covered by the regulations. RMA controls for these forests remain within the authority of councils including wilding risk and any other environmental effects that the council considers require control. However, it is very likely that many councils are not aware of this, as they may assume the NES-PF covers all planted forests."
>
> "The NES-PF … was not designed to cover forests that are intended to be planted solely for permanent carbon sinks. Plantation forests established for harvest have a different set of environmental effects compared to permanent forests, and councils retain the ability to make rules in relation to afforestation in these areas…We do acknowledge that there is a level of confusion about the regulatory controls of permanent carbon forests, and clarification over the scope of the NES-PF in this regard would be helpful."

Afforestation and replanting are land-use activities, and therefore are addressed primarily through District or Unitary Plans. However, the NES-PF regulations prevail over Plan rules that duplicate or conflict with them, except where the NES-PF specifically allows more stringent Plan rules (this is in only limited circumstances[31].) Consequently, TAs are required to ensure that their Plans do not contain controls that conflict with or duplicate the NES-PF regulations.

[29] Shelter belts with an average width of less than 30m; forest species in urban areas; nurseries and seed orchards; trees grown for fruit or nuts; long-term ecological restoration planting of forest species; willows and poplars planted for soil conservation purposes.
[30] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, pages 10, 60 and 15.
[31] Circumstances include where: a rule gives effect to other national instruments (NPSFM, NZCPS); a rule provides for protection of outstanding natural features and landscapes, or significant natural areas; or a rule manages activities in Separation Point granite soils, geothermal areas, karst geology, or protects human drinking water sources.

A review of the forestry-related provisions of all District Plans is beyond the scope of this project. However, a review of several South Island District Plans[32] has found that, prior to changes to align with the NES-PF, the Plans provided for forestry as a permitted activity in Rural Zones, subject to conditions. In addition, some of the Plans had controls that applied to the planting of specific species and/or forests within specified parts of their district. The species were usually more spread-prone ones (including Douglas fir), and the specified parts of the districts were those areas more vulnerable to wilding tree spread. These provisions made the tree planting/forestry a controlled or restricted discretionary activity, with the focus of Councils' discretion or control mostly limited to matters relating to wilding tree spread risk and mitigation.

If TAs are not aware that forests not intended to be harvested are not covered by the NES-PF, they may potentially remove rules relating to forestry and tree planting altogether (rather than just amending them to exclude 'plantation forests' as defined in the NES-PF), or may not develop rules relating to other afforestation, because they believe this is covered by the NES-PF.

An example of how this can occur can be seen in changes made to the Southland District Plan (SDP) in response to the NES-PF.

The SDP contained provisions for 'Forestry Activities' that applied in the Rural Zone. These provisions included constraints on the species[33] that could be planted in the Mountains Overlay area. These provisions were removed as they conflicted with the NES-PF. These provisions related specifically to forestry activities. Given that the definition of "forestry" in the SDP is the "use of land for the planting, tending and harvesting of trees for commercial gain", it is arguable that these rules would not have applied to plantings outside the ambit of the NES-PF anyway. However, other rules making the planting of specific species in the Mountains Overlay area either a restricted discretionary (Rule Rural 3(2)) or a prohibited (Rule Rural 6(2)) activity, did not specifically refer to 'forestry' or 'forestry activities', instead simply referring to "[p]lanting of the following…". These rules were also removed to align with the NES-PF. Arguably, these rules would have applied to forests or tree planting outside the scope of the NES-PF. Consequently, controls that could have applied to new permanent forests and other small plantings such as shelterbelts no longer appear in the SDP.

By contrast, an example of how a District Plan has been amended to avoid conflict or duplication with the NES-PF, but which retains standards and controls for plantings outside the ambit of the NES-PF, is the Hurunui District Plan (HDP). Rather than deleting provisions, use has been made of Advisory Notes and wording amendments to specifically exclude activities managed under the NES-PF.

For example, permitted activity conditions within the Rural Zone include setbacks for new plantings or forestry. Below these setback conditions, an Advice Note has been added:

> "*Note: The planting setback requirements do not apply to activities that are managed under the National Environmental Standards for Plantation Forestry 2017."*

In addition, wording has been added to some provisions to make it explicit that plantings covered by the NES-PF are excluded, for example:

[32] Southland District Plan, Hurunui District Plan, Waitaki District Plan, Mackenzie District Plan, Waimate District Plan.

[33] Scots pine, Corsican pine, Douglas fir, Larch.

Rule 3.4.5 Restricted Discretionary Activities

3A. Planting, *excluding planting defined as afforestation or replanting in the National Environmental Standards for Plantation Forestry 2017*, of Douglas Fir, Ponderosa Pine, Maritime Pine, Bishops Pine, Sycamore, Ash, Red Flowering Currant, and Holly:

(a) within the Forestry Management Area; or

(b) which does not meet the setback requirements under Rule 3.4.3.2(f).

The Council will restrict its discretion to the following matters:

(a) The species being planted and their ability to spread;

(b) The plantation's exposure to seed dispersal (take-off sites) with reference to slope, aspect and wind exposure;

(c) The type and intensity of land use and the type of vegetation cover in surrounding areas where tree seed is capable of being blown or spread;

(d) The adequacy of the applicant's proposed wilding management plan;

(e) Plantation siting and design, including orientation and species composition; and

(f) Potential effects on indigenous biodiversity.

Notably, the HDP explicitly contemplates permanent 'carbon' forests as a land use activity, as shown in the Plan definition for "forestry":

"Forestry" means a forest of selected species of trees that are specifically planted and managed for carbon sequestration or planted and managed specifically for harvesting and production of timber or other wood-based products, and includes:

(a) The understory that has established beneath the canopy;

(b) Replanting of areas that are demonstrated to be failed plantings from previous rotations;

(c) Tree alteration such as the pruning and thinning of trees;

(d) Ancillary forestry earthworks; and

(e) Harvesting and re-planting of trees.

but does not include shelterbelts or amenity tree planting.

These examples illustrate that although a regulatory gap in terms of permanent afforestation may not be present in all districts, in some, District Plan changes made in response to the NES-PF, may have resulted in one. There may also be districts where a regulatory gap exists regardless of the NES-PF, as Plans may simply not address permanent afforestation.

POTENTIAL FOR EXPLOITATION OF AN INCONSISTENT APPROACH

The current NES-PF structure means that an intent to harvest a forest in the future is not a factor that is considered at the point of afforestation or replanting. Although an intention to harvest forms part of the definition of forests covered by the NES-PF, no evidence regarding that intent is required for afforestation or replanting to proceed as a PA, or even as a consented activity. Given this, if the approach taken to afforestation or replanting in the NES-PF is more permissive than that taken in the relevant District Plan, or vice versa, the potential arises for forest owners to exploit the opportunity to be selective in the regulatory pathway they follow for their afforestation proposal.

SMALL PLANTINGS AND SHELTERBELTS

In addition to permanent afforestation, there is also a potential regulatory gap relating to smaller conifer plantings (<1ha) and shelterbelts. These types of plantings are explicitly excluded from the scope of the NES-PF, as noted within the 'plantation forest' definition. Therefore, this potential gap cannot be attributed to confusion or misunderstanding about the scope of the NES-PF.

In some environments, and when more spread-prone conifer species are used, these types of plantings can pose a risk of generating unmitigated wilding spread. Some District Plans contain provisions that apply to these types of plantings and provide the opportunity to manage potential

wilding spread effects. However not all do, meaning a regulatory gap in some districts with the potential to impact on the Wilding Pine Network's 2 issues of concern.

ADDRESSING THE GAP

Project Task 4:
b) Identify how this gap could potentially be addressed, and any significant issues or limitations to the effectiveness of doing so.

There are two main options for addressing the potential regulatory gap relating to permanent afforestation or replanting proposals of more than 1ha. Either amending the NES-PF to include them within its scope or retaining the status quo and encouraging TAs to specifically address permanent forests in District Plans.

These two options are based on the focus of this report, i.e., wilding conifer spread risks and effects. Other potential effects of permanent afforestation have not been considered, and it is possible that there may be other options if other factors are considered. It is also possible that, following the Climate Change Commission report[34] (the CCC report), Government may consider an alternative approach for permanent forests. However, given the potential for further uncertainty, complexity, and inconsistency if a separate instrument is used, it is considered more likely that existing instruments (the NES-PF and/or District Plans) would be used, via amendments and/or some form of national direction addressing all afforestation.

The need to manage the scale and effects of permanent exotic forests was recognised in the CCC report. The report acknowledges that current policy settings mean there is strong incentivisation of new exotic afforestation, and that this can have impacts on local communities and environments. It recommends that a combined regulatory and policy approach will be required to ensure these potential impacts are managed appropriately –

> "Constraining the NZ ETS incentive could help reduce the scale of afforestation nationally, but influencing where afforestation happens, including how much in specific regions, would likely require a regulatory approach, for example through planning rules."[35]
>
> "Recommendation 25: Manage forests to provide a long-term carbon sink
> 2. Designing a package of policies to reduce reliance on forestry removals and manage the impacts of afforestation including:
>
> a. Amendments to the NZ ETS to manage the amount of exotic forest planting driven by the scheme (see also Recommendation 11 on the NZ ETS).
> b. A clear position on the role and desirability of different types of permanent exotic forests as carbon sinks, and amending the NZ ETS and other policies accordingly.
> c. Land-use planning, direction and tools to help local government manage afforestation, mitigate localised impacts of afforestation and to achieve environmental co-benefits."[36]

Regardless of the approach taken, urgency in addressing this potential regulatory gap is needed. Incentivising factors are currently giving rise to a significant increase in the number and scale of new

[34]Ināia tonu nei: a low emissions future for Aotearoa, He Pou a Rangi Climate Change Commission, May 2021.
[35]Ināia tonu nei: a low emissions future for Aotearoa, He Pou a Rangi Climate Change Commission, May 2021, page 321.
[36]Ināia tonu nei: a low emissions future for Aotearoa, He Pou a Rangi Climate Change Commission, May 2021, page 323.

permanent exotic forest projects occurring in some areas[37]. Regulatory gaps mean in some areas there are no opportunities to ensure the potential risks and effects of wilding tree spread are addressed, meaning a risk that new areas of 'legacy' wilding conifers will become established.

It is important that potential confusion and uncertainty about the scope of the NES-PF is urgently addressed in the immediate term. As a minimum, all TAs should be advised of this potential gap in the regulatory framework.

Extend the Scope of the NES-PF

It is important to note the significant issues identified in Section 3 of this report, in relation to the afforestation and replanting components of the NES-PF that relate to the risks and effects of wilding tree spread. Extending the scope of the NES-PF to include permanent forests should therefore only occur if these issues are addressed, a more precautionary approach is implemented, and the issues associated with the WTRC are properly resolved.

This option would involve amending the NES-PF to extend its scope to forests that are not intended to be harvested. This could be achieved primarily through an amendment to the current definition of 'plantation forest' and 'plantation forestry', to remove reference to harvesting or replanting, e.g.:

> "(a) at least 1 ha of continuous forest cover of forest species that has been planted ~~and has or will be harvested or replanted~~;"

Other consequential amendments may also be required, but that level of detail has not been addressed here.

The NES-PF review report indicated that the environmental effects of forests established for harvest are different to those of permanent forests, and that consequently the NES-PF was not designed to cover permanent forests[38]. However, the NES-PF regulations for the eight different forestry related activities effectively apply independently of one another. The environmental effects addressed by the NES-PF for afforestation or replanting activities are the same as those that would be relevant for a permanent forest proposal, and none of the afforestation or replanting PA conditions relate or refer to an intent to harvest, or any of the potential effects of harvesting, or any other forestry activity. An afforestation or replanting proposal may proceed as a PA, or even as a consented activity, without any reference to the other parts of the NES-PF, which generally only apply as and when the activities addressed by them are going to occur. Consequently, at this initial afforestation or replanting point in the process, there is nothing, aside from the NES-PF definition for 'plantation forest', to distinguish permanent forest proposals from those that will or may be harvested in the future.

This option would create consistency in the manner that any afforestation or replanting activity is addressed, regardless of whether it will be permanent or harvested. The environmental effects of the activity of afforestation or replanting are the same; it is the effects of subsequent activities relating to the forest, such as pruning and thinning, harvesting, slash management etc., that differ. These subsequent effects are addressed separately under the NES-PF.

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[37] Examples occurring in North Otago are described in these links https://www.odt.co.nz/regions/north-otago/apology-lack-action-over-carbon-farming and https://www.nzherald.co.nz/the-country/news/carbon-forestrys-desirability-challenged-at-north-otago-meeting/3744CZBD237F67T57MBR3AR44M/

[38] Report on the Year One Review of the National Environmental Standards for Plantation Forestry, Te Uru Rākau Forestry New Zealand, April 2021, page 15.

In terms of the risks and effects of wilding tree spread, although a permanent forest has the potential to spread wilding trees for a longer period than a forest that will be harvested, the nature of these effects is the same, as are likely prevention and mitigation measures.

A consistent approach to all exotic afforestation and replanting proposals also addresses the potential that otherwise exists, for resource users to exploit the opportunity to be selective in the way a proposal is presented, in order to follow the least restrictive regulatory pathway. This potential exists so long as the NES-PF and District Plans take a considerably more or less permissive approach and make a distinction between proposals based on an intended future activity (i.e., harvesting), but do not require any evidence or any binding requirement that that future activity will occur, at the point of enabling or consenting the proposal.

Retain Status Quo and Address Permanent Forests Through District Plans

Given the NES-PF definition for 'plantation forest', TAs may have rules in their Plans that address afforestation and replanting with permanent plantings that are not intended to be harvested. These rules are not constrained by the NES-PF and may potentially be more stringent than the NES-PF.

This option enables a less standardised and more localised approach to managing the impacts of permanent forests. In terms of wilding tree spread risks and effects it enables TAs to consider site-specific factors, to address potential effects on the values of local environments, beyond just SNAs and OLNFs, and for the history of wilding conifer spread to inform Plan provisions.

This option also enables a district-wide approach to managing different land use activities, and the potential to consider the cumulative impact of permanent afforestation at a landscape and district scale. There are growing concerns within some communities at the rate and scale of conversion of agricultural land to permanent forestry, and there may be reasons beyond wilding conifer effects, that Councils may wish to retain a level of control over permanent forest proposals.

These factors do mean that a more variable approach would be taken to permanent afforestation around the country. This may not of itself be a problem, however where a District Plan approach to afforestation and replanting is more, or less, permissive than the NES-PF, this inconsistency can create the potential for resource users to be selective in the regulatory pathway followed for their proposal. This highlights the importance that, regardless of the approach taken to permanent forests, changes are made to the NES-PF to ensure a more robust approach to addressing wilding spread risks and effects of afforestation and replanting proposals, as detailed in Section 3 of this report. A more precautionary approach and addressing the issues associated with use of the WTRC in the NES-PF will reduce the potential for resource users to be selective, but should also reduce the adverse long-term wilding conifer outcomes that could result if they are.

If this option is pursued, it would be useful, in terms of increasing clarity and certainty, if the NES-PF definition for 'plantation forest' was amended to explicitly exclude permanent forests. This could be achieved by adding permanent forests to the current list of plantings specifically excluded from the definition.

Potential Action

Either of the two options are likely to take considerable time. Amending the NES-PF, particularly given the more substantial changes suggested in Section 3, could take a significant period, and is subject to central government willingness to act. The current review of local government systems may also impact on

Consequently, in addition to pursuing opportunities to work with and advocate to central government on changes to the NES-PF, the Wilding Pine Network should identify opportunities to work with or advocate to TAs on addressing existing regulatory gaps in District Plans. The current review of local government systems may impact on TAs' willingness to consider changes to District Plans, or on the timing of any changes. Therefore, a prioritised approach should be taken, potentially identifying areas where the risk of wilding conifer spread is greatest, then review relevant District Plans to identify those where gaps exist. This should include gaps relating to shelterbelts and smaller conifer plantings, as these could potentially be addressed independently of any initiatives or advocacy relating to afforestation and replanting of permanent forests.

SECTION 5: REGIONAL PEST MANAGEMENT PLANS

Project Task 5:
a) Review wilding conifer provisions contained within Regional Pest Management Plans.
b) Identify 'good practice' provisions that are/should be included.

'GOOD PRACTICE' PROVISIONS

In 2016, MPI released comprehensive guidance material for use by Regional Councils and Unitary Authorities in the development of wilding conifer programmes in their Regional Pest Management Plans (RPMPs). This guidance material was developed under the Wilding Conifer RPMP Rule Development Project (the Project), which was a key action arising from the National Wilding Conifer Management Strategy. The objective of the Project was to develop agreed RPMP rules for the management of wilding conifers to improve regulatory consistency and effectiveness.

Following release of the guidance material, MPI signalled to Councils the 'bare minimum' components of the material it hoped to see consistently adopted into RPMPs, particularly in relation to the provision of long-term protection of public investment in wilding conifer control. The 'bare minimum' components were:

- Consistent adoption of the wilding conifer definition, where wilding conifers are specified as a pest in the RPMP.
- Regulatory protection of public investment in wilding conifer control through –
    - rules requiring occupiers to remove all wilding conifers on their land subsequent to any publicly funded wilding conifer control operations being undertaken on their land; and
    - rules requiring occupiers to remove wilding conifers within 200m of property boundaries where publicly funded control has been undertaken on the adjoining land.
- Regulatory support for keeping clear areas clear, to prevent new areas of wilding conifer infestation.

Arguably, these provisions provide a useful basis for identifying 'good practice' provisions that should be included in RPMP wilding conifer programmes.

REVIEW OF RPMPS

All Regional Councils and Unitary Authorities have undertaken reviews of their RPMPs in recent years, following the release of the National Policy Direction for Pest Management 2015. These reviews have all been undertaken after the release of the Project guidance material by MPI.

A desktop review of all RPMPs has been undertaken to identify how many regions have wilding conifer pest management programmes, and how many have incorporated the 'good practice' provisions identified above. The results of this review are set out in Table 2.

Of the 16 RPMPs reviewed, 4 do not contain wilding conifer pest management programmes, and 1 only specifies wilding Douglas Fir as a pest for the purposes of a specific site-led pest management programme. Therefore, further evaluation was limited to the remaining 11 RPMPs.

All 11 contain a wilding conifer control programme, with 10 specifying wilding conifers as a pest, and 1 just specifying four conifer species as pests (making these species a pest in both planted and

wilding form, but other conifer species in wilding form are not a pest). Eight have used the same, or a similar, definition for 'wilding conifers' as set out in the Project guidance material. One has used a different definition, and another has not defined 'wilding conifers' at all.

Two of the RPMPs' wilding conifer control programmes contain just one rule. In both, the rule is a boundary rule, but the applicable distance (10m and 50m respectively) is far less than the 200m recommended in the guidance material, and in 1 of the RPMPs the rule only applies where a site-led programme is declared.

In terms of regulatory protection of public investment in wilding control, 8 RPMPs have a rule requiring occupiers to remove wilding conifers from their land if there have been previous control operations to remove wilding conifers undertaken on that land. Most, but not all of these refer specifically to 'publicly funded' control operations. Eight RPMPs also include a 200m boundary rule and/or Good Neighbour Rule (GNR) that applies where wilding conifers have been/are being cleared/managed within 200m of the boundary on the adjoining property. Although these rules do not specifically refer to the control on the adjoining property being publicly funded, the rules effectively achieve protection of investment in wilding control, whether it is privately or publicly funded.

Five RPMPs go a step further, containing specified pest agent rules. These require the removal of pest agent conifers[39] within 200m of the boundary where wilding conifers have been/are being controlled/managed within 200m of the boundary on the adjoining property. In 2 RPMPs this rule is explicitly limited to where the control on the adjoining property is publicly funded, while in the other 3 it does not appear to be limited in that way[40]. These rules provide some additional protection of investment in wilding conifer control by addressing planted conifers that may spread seed into cleared areas, although this is limited because the definitions of 'pest agent conifer' used in the RPMPs generally exclude plantation trees[41], and in one case appears to also exclude shelterbelts and planted conifers of <1ha[42].

Regulatory requirements to keep clear areas clear (i.e., where wilding conifer infestation is very light or has not yet occurred) is the area least well addressed in RPMPs. This type of rule would be triggered by the presence of the pest, rather than by wilding conifer control operations occurring either on the same or an adjoining property. Five RPMPs contain a rule requiring the removal of specified conifer species (e.g., Contorta, Scots pine, Mountain pine) either within specific mapped areas, upon receipt of notice from the Council, or region-wide. These rules would apply to the specific conifer species in either planted or wilding form. However, no RPMP contains a 'keep clear areas clear' rule that applies generally to 'wilding conifers' (i.e., regardless of species).

The most extensive and consistent adoption of the recommended definitions and provisions set out in the MPI Project guidance material has been in the regions with arguably some of the most significant wilding conifer issues in the country – Canterbury, Otago, Southland and Marlborough. Although there is some variation in their wilding conifer programmes, all 4 of these RPMPs have used the recommended 'wilding conifer' definition; all contain rules to protect public investment in

[39] Conifers capable of spreading seeds that become wilding conifers, but which are a species that has not been specified a pest in its planted form.
[40] Although in the ORC RPMP pest agent conifer rule this is unclear, as there is no reference within the rule to publicly funded, but the explanation to the rule states that it applies where the control was publicly funded.
[41] With the exception of Waikato, which does not define 'pest agent conifer' and appears to be technically applicable to plantation trees.
[42] See ORC RPMP notes in Table 2.

wilding conifer control, both on-property and at property boundaries (using the recommended 200m setback distance); all provide some protection of private investment in wilding conifer control through boundary and/or GNR rules (using the recommended 200m setback); and all contain a pest agent rule. However, even these 4 RPMPs have not consistently adopted provisions aimed at keeping clear areas clear.

TABLE 2: ANALYSIS OF WILDING CONIFER PROVISIONS OF RPMPS

Note: WC = wilding conifers

Region RPMP year	WC specified as pest?	RPMP Rules Project definition of WC used?	Any particular conifer species specified as pest?	Pest Agent Rule (and definition) included?	GNR included?	Specific publicly funded control rule included?	Other rules
Northland RPMP 2017	Yes	No	No[1]	No[1]	Yes. Applies 10m from boundary.	No	None
NOTES for Northland RPMP: 1. Specific note in RPMP that rule does not apply to planted conifers because costs would outweigh benefits, and these "…best managed through other avenues such as the RMA or through the NZ WC Management Strategy".							
Waikato <u>Proposed</u> RPMP 2021	Yes	Partially	Yes Contorta	Yes (No[1]) Apply within 200m of boundary if "pest pines"/WC destroyed through control operations on adjoining property within 200m of boundary, and reasonable steps to manage by adjoining occupier.	No	Yes But specific reference to public funding only in the WC rule, not in Contorta rule. <u>Wilding Conifers</u>: Occupiers to destroy all WC on their land if has been publicly funded control operations to destroy WC or planted conifers on that land. <u>Contorta</u>: Occupiers to destroy all contorta if located on land that "has had a control operation carried out on it"[2]	<u>Wilding Conifers</u>: Occupiers to destroy all WC within 200m of boundary if adjoining occupier controlling WC within 200m of boundary.
NOTES for Waikato RPMP: 1. Although definition of 'pest agent' from BSA is included in the glossary, there is no specific definition or explanation of "pest agent pine" or "pest agent wilding conifer" (the terms used in the Contorta and WC programme pest agent rules respectively). Because of the lack of definition of "pest agent pine", it is arguable that							

this rule would technically apply to any planted conifer, including plantation trees. Given the cost/benefit and exacerbator pays tests within the BSA and NPD, it may be difficult to enforce this rule in relation to plantations and larger scale areas of source trees. Also, "pest agent wilding conifer" is, technically, not a thing when WC specified as a pest. This makes this rule confusing.
2. Does not specify that control operations publicly funded, nor that involved removal of WC and/or planted conifers; just says "control operations".
3. Notes to Contorta rules refer to National Control Programme. States "Whilst Crown investment into this programme continues, these rules will apply." Does this mean will not apply if Crown investment ceases?

Region RPMP year	**WC specified as pest?**	**RPMP Rules Project definition of WC used?**	**Any particular conifer species specified as pest?**	**Pest Agent Rule (and definition) included?**	**GNR included?**	**Specific publicly funded control rule included?**	**Other rules**
Bay of Plenty RPMP 2020	Yes	No[1]	Unclear[1]	No	No	Yes Occupiers to destroy all WC on land where publicly funded control operations to destroy WC carried out.[3]	<u>Progressive Containment</u>: Occupiers to destroy all Contorta, Scots, Mountain, Dwarf mountain & European Larch unless alternative agreement with Council. [2] <u>Sustained Control</u>: Occupiers to destroy all Bishops, Corsican, D. Fir, Maritime, Ponderosa, Radiata, if required by written direction OR if within 200m of boundary if adjoining occupier also destroying these species within 200m of boundary. [2]

NOTES for Bay of Plenty RPMP:
1. 'Wilding Conifers' are included in Table of organisms classified as pests, but no specific definition of WC included. Conifer species are listed under 'Wilding Conifers' in the pests table. Species include: Contorta, Scots, Mountain, Dwarf mountain, European Larch (all Progressive containment), Douglas Fir, Bishops, Maritime, Ponderosa, Corsican, Radiata (all Sustained control). It is unclear whether pest status only applies in wilding form, or in wilding and planted form to all these species.

In Programme descriptions, includes the title "Wilding Conifers" at top, but then lists each conifer species, with a detailed description and potential adverse effects of that species. No description or definition of what is wilding vs planted, or explicit clarification of whether programme/rules apply only to wilding form or to both wilding and planted. Confusing and unclear.
2. In wording of these rules, is no reference to WC or to wilding form; just refers to the specific conifer species. On the face of it, appears rule applies to wilding and planted form. For sustained control rule, is reference in explanation section to "…management of wilding conifers listed in Rule 5". This could suggest intent to only apply to wilding form, but not explicit in rule or in pest specification table or anywhere else in Plan.
3. This is generic rule applying across all programmes. Is only rule specifically applying to 'wilding conifers' and no specific conifer species are listed or included in the rule. However, no specific definition of 'wilding conifers'.

Region RPMP year	**WC specified as pest?**	**RPMP Rules Project definition of WC used?**	**Any particular conifer species specified as pest?**	**Pest Agent Rule (and definition) included?**	**GNR included?**	**Specific publicly funded control rule included?**	**Other rules**
Gisborne RPMP 2017	Yes	Similar	No	No	Yes Only where site-led programme declared. Applies within 50m of boundary where adjacent occupier controlling WC.	No	None
Horizons RPMP 2017	No	No	Yes[1] Contorta, Dwarf Mountain, Mountain, Scots	No	No	No	Within Active Management Zone occupiers to notify Council of specified conifer species on their land. Removal by Council, unless occupier disagrees, in which case required to remove themselves. Specific rules for Karioi Forest Zone, including keeping 30m buffer clear.

NOTES for Horizons RPMP:
1. These 4 species are pests whether planted or wilding. Other conifer species in wilding state are not pests as WC not specified as pest.
Council working alongside the Nature Central Wilding Conifer Implementation Plan.

Region RPMP year	WC specified as pest?	RPMP Rules Project definition of WC used?	Any particular conifer species specified as pest?	Pest Agent Rule (and definition) included?	GNR included?	Specific publicly funded control rule included?	Other rules
Hawkes Bay RPMP 2018	Yes	Yes[1]	Unclear Intention appears to be yes, but unclear whether legally have done so[2]	No	Yes Applies to WC, Scots, Mountain and Dwarf mountain pine; applies within 200m of boundary where neighbour taking reasonable steps to manage WC within 200m of boundary.	Yes Applies to WC on land where publicly funded control operations carried out to destroy WC and/or planted conifers spreading WC.	Yes Occupiers to destroy all contorta, region wide. Occupiers to destroy all Scots, Mountain and Dwarf mountain pine if within specified area.
NOTES for Hawkes Bay RPMP: 1. Wording in WC description highlights ongoing confusion around WC vs planted conifers: "Owing to their hardiness, wilding conifers have been used as a shelter belt species…" 2. Contorta, Scots, Dwarf mountain, Mountain specifically referred to in programme description as needing to be specified as pest "…in their own right, in addition to being pests under the wilding conifer definition…", and are included in programme objectives and rules. BUT these species not included in 'Organisms specified as pest' table or section.							
Greater Wellington RPMP 2019	Yes	Yes[1]	Unclear Intention appears to be yes, but unclear whether legally have done so[2]	No	No	Yes Applies to WC on land where publicly funded control operations carried out to destroy WC and/or planted conifers spreading WC.[3]	Yes Occupiers to destroy all contorta, region wide. Anyone who sees WC must report this to Council.
NOTES for Greater Wellington RPMP: 1. Wording in WC description highlights ongoing confusion around WC vs planted conifers: "Owing to their hardiness, wilding conifers have been used as a shelter belt species…" 2. Contorta, Scots, Dwarf mountain, Mountain referred to as "special interest species" in programme description and states that they need to be specified as pest "…in their own right, in addition to being pests under the wilding conifer definition…". Are not referred to specifically in programme objective (this just refers to WC),							

nor in any rule, other than Contorta which has specific rule requiring removal throughout region. But explicitly listed for inspection of plant outlets and markets to ensure not being sold. BUT none of these species included in 'Organisms specified as pest' table or section.
3. This is only rule applying to WC.

Region RPMP year	**WC specified as pest?**	**RPMP Rules Project definition of WC used?**	**Any particular conifer species specified as pest?**	**Pest Agent Rule (and definition) included?**	**GNR included?**	**Specific publicly funded control rule included?**	**Other rules**
Tasman Nelson RPMP 2019	No Only wilding Douglas Fir are specified as pests	No	No	No	No	No	Abel Tasman NP site-led programme: Occupiers to report wilding D. Fir on their land, and to destroy before setting seed.
Marlborough RPMP 2020 (Pest conifer programme not yet ratified)	Yes	Yes[1]	Yes[2] Contorta Scots Mountain Bishops Maritime Mexican weeping Ponderosa Corsican Eur. Larch Western white	Yes Applies within 200m of boundary, if pest conifers destroyed through control operations on adjoining property within 200m of boundary and adjoining occupier taking reasonable steps to manage pest conifers within 200m of boundary.	Yes Applies within 200m of boundary, if pest conifers destroyed through control operations on adjoining property within 200m of boundary and adjoining occupier taking reasonable steps to manage wilding conifers within 200m of boundary.	No, but effect is same. Rules are triggered by 'control operations', which defined, but no specific reference to publicly funded. Occupiers to destroy all pest conifers if in an area where been control operations to remove pest conifers.	Outside High Risk Management Area (HRMA), occupiers to destroy all pest conifers of species listed[3].

NOTES for Marlborough RPMP:
1. "Pest conifers" is term used for the subjects of the programme and in the pest specification table. WC are defined but included as a class of subjects within "pest conifers".
2. These species are all listed as subjects under "pest conifers", and listed separately from D.Fir and Radiata, which are explicitly only pests in wilding form. Appears to mean these listed species are pests in both planted and wilding form.
3. This is a 'keep clear areas clear rule', but does not apply to wilding D.Fir & Radiata.

Region RPMP year	WC specified as pest?	RPMP Rules Project definition of WC used?	Any particular conifer species specified as pest?	Pest Agent Rule (and definition) included?	GNR included?	Specific publicly funded control rule included?	Other rules
Canterbury RPMP 2018	Yes	Yes	Yes Contorta Corsican Dwarf mountain Mountain Eur Larch Scots	Yes Within WC Containment Area, applies to pest agent conifer within 200m of boundary if publicly funded control operations to destroy WC, listed conifer species or other planted conifers undertaken on adjoining property within 200m of boundary since 1 Jul 2016.	Yes Within WC Containment Area, applies to WC or listed conifer species within 200m of boundary if WC or listed conifers cleared and adjoining occupier taking reasonable steps to manage WC within 200m of boundary since 1 Jul 2016.	Yes Within WC Containment Area, applies to WC or listed conifer species located in area where publicly funded control operations to destroy WC, listed conifer species or other planted conifers been carried out.	Within WC Containment Area, applies to WC or listed conifer species within 200m of boundary if WC or listed conifers previously destroyed on adjoining property within 200m of boundary since 1 Jul 2016.
Otago RPMP 2019	Yes	Yes[1]	Yes Contorta Corsican[2] Eur Larch Mountain Dwarf mountain Scots	Yes Applies to any pest agent conifer within 200m of boundary if WC or listed conifer species cleared on adjoining land within 200m of boundary since Jan 2016[4].	Yes Applies to WC and listed conifer species within 200m of boundary if been control operations to clear WC or listed species on adjoining land since Jan 2016 and adjoining occupier taking reasonable steps to manage WC or listed conifer species within 200m of boundary.	Yes Applies to WC or listed conifer species located in area where publicly funded control operations carried out to eliminate WC since Jan 2016.	Occupiers to remove WC or listed conifer species within 200m of boundary if WC or listed species previously eliminated on adjoining property within 200m of boundary since Jan 2016.
NOTES for Otago RPMP:							

1. Have added sentence at end of definition that says “This also excludes planted conifers of less than 1ha, such as windbreaks and shelterbelts existing before March 2019”. Does not make sense that ‘planted conifers’ need to be excluded from definition of ‘wilding conifers’ because by definition, the latter do not include the former! Shows ongoing confusion around dealing with WC as well as some conifer species specified as pests. Also suggests some misunderstanding about the reference to ‘plantation’ in recommended WC definition. This reference excludes wilding conifers that occur within plantations. It does not exclude the plantations, because they are planted so would never be WC, so don’t need to be excluded from the definition. Suspect that to achieve its intention, this sentence should be moved and added to the note relating to Corsican, Larch, mountain, Scots etc – see 2 below. This becomes important in relation to note 3 below.
2. Except for Contorta, Plan includes note relating to these species stating that pest status does not include “specimens used or intended to be used for plantation forestry purposes”. Provides an exclusion for these species if part of existing or future plantation. Means these species could still be planted in the region for plantation purposes. To some extent this undermines the intention behind guidance material suggesting specifying these species as pests, which was primarily to halt any new planting of these lower value, spread-prone species. Also see note 1, which would mean that existing plantings of these conifers that are <1ha would also be excluded.
3. The Plan specifically notes in the programme description section that no rules in the Plan require removal of existing shelter belts and other existing planted conifers of <1ha. Instead, it refers to transitional agreements for removal of such plantings over time via the Biosecurity Strategy. This is not noted in the rules themselves, which refer to removal of WC, as well as the specific conifer species specified as pests (and therefore could include planted trees of these species). So, the limited ambit of the rules is not clear without reading the description section. The note linking to the specified species in the Pests table (excluding Contorta) excludes these species when they are part of a plantation (see note 2), and potentially, existing plantings of <1ha as well (see note 1). Confusing, and legality of exclusion in programme description but not in rules is unclear. Arguably should have used Advice Notes? Also raises the questions a) other than WC, to what trees do the rules apply and therefore why list the species in the rules? This means that the effect of specifying these species as pests, is limited to preventing new, non-plantation forestry plantings of these species. And b) would the pest agent rule ever apply, given that the pest agent definition excludes trees within plantations and the programme description says rules don’t require removal of existing planted conifers of <1ha? Possibly, it could only apply to new, non-plantation conifer plantings.
4. Within rule is no reference to publicly funded control, but in explanation of rule, indicates rule only applies where the control was publicly funded.

Region RPMP year	**WC specified as pest?**	**RPMP Rules Project definition of WC used?**	**Any particular conifer species specified as pest?**	**Pest Agent Rule (and definition) included?**	**GNR included?**	**Specific publicly funded control rule included?**	**Other rules**
Southland RPMP 2019	Yes	Yes	Yes Contorta Mountain pine	Yes Within WC Management area, applies to pest agent conifer within 200m of boundary, if publicly funded operations to	Yes Within WC Management area, applies to WC within 200m of boundary where adjoining occupier destroyed WC since 14 Jun 2019 &/or	Yes Within WC Management area, applies to WC on land where publicly funded control operations to clear WC undertaken	Occupiers to destroy all contorta and mountain pine upon written notice from Council.

				destroy WC/planted conifers undertaken on adjoining land within 200m of boundary since 14 Jun 2019.	taking reasonable steps to manage WC within 200m of boundary since 14 Jun 2019.	since commencement of Plan.	
Auckland RPMP 2020: No WC programme; no conifer pest specifications							
Taranaki RPMP 2018: No WC programme; no conifer pest specifications							
West Coast RPPMP 2018: No WC programme; no conifer pest specifications							
Chatham Islands RPMP 2021: No WC programme; no conifer pest specifications							

GAPS AND LIMITATIONS IN RPMPS

Project Task 5:
c) Identify any key gaps and/or limitations, and potential additional provisions or approaches that could be considered to better address the 2 issues of concern.

GAPS

CONSISTENCY ACROSS RPMPS

The review of RPMPs has identified that progress has been made, in that more than half of RPMPs now contain wilding conifer programmes and specify wilding conifers as a pest. However, there remains considerable variation in the approaches taken to wilding conifer management in RPMPs. Although this likely reflects the scale of wilding conifer problems in different regions, the extent to which the 'bare minimum' provisions recommended by MPI have been incorporated is variable. Even the recommended definition for 'wilding conifers' has not been universally utilised.

There also appears in some cases, to be confusion and a lack of clarity and consistency around differentiating between conifers in a wilding form and those that have been planted[43]. This apparent confusion in relation to specifying some species as a pest in wilding and planted form means that in some cases it is questionable whether the legal status intended has been achieved[44].

REGULATORY PROVISIONS TO KEEP CLEAR AREAS CLEAR

A key gap in RPMPs is a lack of regulatory provisions to effectively keep areas that are clear of wilding conifers, clear. None of the 11 RPMPs with a wilding conifer programme contain a 'keep clear areas clear' type rule that applies generally to wilding conifers, regardless of species, source, or the occurrence of wilding conifer control activities.

Also referred to as 'clear land rules', this type of rule acknowledges that even if a pest is not being managed under an eradication programme, smaller infestations, particularly in areas where the pest has not yet become established, can and should be removed to stop further spread of the pest. This type of rule can require occupiers take early action, before an issue becomes too big or costly to tackle, and importantly, before the wilding conifers themselves are able to cone and spread seed.

These rules are particularly important in areas that are vulnerable to wilding conifer infestation, but which are currently clear of wilding conifers, or have only a light, scattered presence. History has shown that one of the contributors to the exponential growth in wilding conifer problems is a lack of early action. Therefore, these rules provide an important preventative measure (potentially supporting and providing 'regulatory back-up' to education, advocacy, or supported control measures), aimed at preventing new areas of wilding conifers becoming established, and will ultimately be important to the long-term success of wilding conifer pest management programmes.

The cost of wilding conifer control compounds significantly the longer any infestation is left uncontrolled. This can make it much more difficult to meet cost/benefit requirements under the BSA to require occupiers to clear them. Therefore, rules requiring occupiers located in 'clear' areas to

[43] For example, 2 RPMPs state in their programme description section that "[o]wing to their hardiness, wilding conifers have been used as a shelter belt species…". This sentence is confusing and suggests a level of misunderstanding. 'Wilding conifers' are, by definition, not deliberately planted, so couldn't be used for shelterbelts; and 'wilding conifers' are not a species – they are a group of organisms defined by the way that they have germinated (i.e., naturally) and could be any conifer species.
[44] See Bay of Plenty, Hawkes Bay and Greater Wellington RPMP notes in Table 5.1.

take early action to remove wilding conifers before they cone, are a key mechanism to help halt the cycle of new 'legacy' areas of wilding conifers occurring due to a lack of early action.

The potential for this type of rule to impose an inequitable burden on some occupiers who may have a higher level of existing wilding conifers is minimal if it is applied in areas where there is a high confidence that the pest is either not present, or present in only very light numbers. Furthermore, it is possible to provide for an 'alternative to compliance' type agreement within a rule, which allows an alternative, property-specific, negotiated approach to wilding conifer control, in the case of individual properties with a higher density of existing wilding conifers and/or if there is uncertainty about the level of infestation in parts of the area to which the rule applies. Providing for an 'alternative path to compliance' within the rule, rather than some form of infestation size threshold, can help avoid the unintended effect of incentivising inaction.

It is acknowledged that clear land rules can add surveillance and enforcement costs to wilding conifer pest programmes, particularly given that vulnerable environments tend to be large scale, and where there is a light wilding conifer presence it is often scattered over large areas. However, the current wilding conifer control programmes occurring across the country are a clear illustration of the far more significant long-term costs of a lack of early action. There are also likely to be ongoing developments and improvements in technological tools to assist with land surveillance and monitoring that could potentially be used in this regard, whether at a local, regional, and/or national scale.

Clear land rules are particularly important given the existing policy and economic drivers that have, and will likely continue to, incentivise afforestation. These are increasing the number and extent of potential new wilding conifer sources, as well as increasing the areas potentially at risk of wilding conifer spread. When this is combined with: the limitations under either the BSA or the RMA to impose requirements on the owner of source trees to undertake wilding conifer control on property owned by someone else; the issues identified with the existing regulatory framework for new afforestation (see Sections 3 and 4); and the fact that it is very difficult to prevent all risk of wilding spread, rules requiring the removal of wilding conifers before they cone are a key mechanism in preventing new areas of wilding conifer infestation.

It is arguable that there could be secondary potential impacts from this type of rule. As occupiers subject to the rule become more aware of the limitations of regulatory frameworks to require off-property wilding conifer control by source tree/forest owners, this may generate a sense of injustice and the imposition of social pressure on owners of source trees. It could potentially incentivise occupiers to initiate private negotiations to seek compensation, or the source owner taking responsibility for wilding control on the other person's land. It could potentially also lead to occupiers pursuing civil legal proceedings regarding the nuisance and/or costs that the owner of the source trees is causing them, and/or to pursue an enforcement order or abatement notice under the RMA for a breach of the duty set out in s17 of the RMA.

LIMITATIONS

BSA FRAMEWORK IS SUBJECT TO PROPERTY LAW

A fundamental limitation for regulation within the BSA (and RMA) framework is the inability to require or authorise the owner of trees that are spreading wilding conifers onto another property, to undertake control of those wildings. This means if there are seeding conifer trees near a property boundary and seed is spreading onto nearby property, the owner of the source trees cannot be required to clear the resulting wildings on another person's property. This can create a significant

burden on the 'receiving' property owner over a long period of time, and it means it is difficult for regulatory agencies to incentivise the owner of the source trees to either remove them or take action to prevent or mitigate the spread. This also poses a risk of reinfestation in areas where wilding control has been carried out if nearby source trees remain.

MANAGING THE SOURCE

If seed source trees are not removed, or effectively managed and contained, it can be difficult to successfully control or manage the spread of wilding conifers over the long term. Consequently, a key issue for wilding conifer pest management programmes becomes how to manage trees that are a source of wilding conifers.

Wilding conifers spread both from planted conifer trees, and from mature wilding conifers. The key difference in how source trees can be managed through regulatory methods in Pest Management Plans (PMPs) is whether the source itself is declared a pest or not.

For PMP rules to require the control or removal of an organism, the organism must generally be specified as a pest. For seed source trees that are themselves wildings, these may be addressed by specifying 'wilding conifers' a pest and developing PMP programmes with rules and other methods for control accordingly.

Where seed source trees are planted, it can be more complex. These source trees will generally have been legally planted, and may be individual trees, small groups of amenity plantings, shelterbelts, woodlots, or plantations. Arguably, preventing and mitigating the spread of wildings from planted conifers should be addressed through the RMA framework at the time that new plantings are made, given that this is a key environmental effect of the planting activity. However, most existing planted sources of wilding conifers have been legally planted, either without any requirements relating to preventing or mitigating wilding conifer spread, or if such requirements have been imposed, they do not effectively prevent wilding spread.

Some planted seed source trees are species with low commercial value, and for these it is possible to specify the species as a pest. This not only enables PMP rules requiring their removal or control, but also serves to prevent new plantings of these species (as ss52 and 53 BSA are triggered), thereby contributing over time to a reduction in potential new sources of wilding conifers.

The MPI Project guidance material recommended that RPMPs include 5 spread-prone conifer species with very limited commercial value as specified pests[45], in addition to wilding conifers. This would mean trees of these species would be pests in their planted state, in addition to being pests under the wilding conifer definition in their naturally regenerated (wilding) state. The review of RPMPs identified that particular conifer species have been specified as pests in 7 RPMPs, although not all of these specify all 5 species recommended in the guidance material.

Where the planted seed source trees are a species that has commercial value (e.g., Douglas fir, or Radiata pine), specification of the species as a pest is impractical, due to the statutory prohibition on propagation, sale, breeding, communication etc. that is triggered[46]. These trees may instead be managed using pest agent provisions. Provided wilding conifers are specified as a pest in the PMP, planted conifers which produce seeds that germinate as wilding conifers, would fall within the BSA definition of 'pest agent'[47]. The BSA enables PMP programmes to contain rules that require the

[45] Contorta, Scots pine, Mountain pine, Dwarf mountain pine, European larch.

[46] The impact of sections 52 & 53 of the BSA upon specification of an organism as a pest.

[47] Section 2 of the BSA defines pest agent as:

Pest agent, in relation to any pest, means any organism capable of –

removal or management of specified pest agents.[48] Specifying an organism as a 'pest agent' is for the purposes of the pest agent rule(s) only and does not equate to specifying the organism(s) a pest. It is also possible to limit the application of pest agent rules both in the way 'pest agent conifer' is defined, and by prescribing the circumstances or criteria that determine where and when a rule may apply (e.g., within prescribed boundary setbacks; within a specified area/zone; only triggered when wilding control is undertaken, etc).

The review of RPMPs identified that 5 RPMPs contain pest agent rules within their wilding conifer programmes. In all cases, the rules are 200m boundary control rules, triggered by wilding conifer control being undertaken on the adjoining property[49]. In 4 of the RPMPs the definition of 'pest agent conifer' specifically excludes plantation trees.

LIMITATION OF PMP RULES MANAGING THE SOURCE

All PMP rules that require the removal or control of seed source conifers, whether the source trees are themselves wildings, are planted trees that are declared pests, or are pest agents, must meet cost/benefit tests and principles related to the exacerbator pays approach, set out within the BSA and NPD framework. One of the main issues with these types of rules, is that they impose costs on the exacerbator for past actions/inactions/decisions that were legally compliant at the time. Also, in some circumstances, it may only be practical for such rules to apply to trees within prescribed boundary setbacks and there are unlikely to be many options available to, and fully within the control of, the occupier, to avoid or reduce the costs imposed. In these situations, it is arguable that it may not be an efficient cost allocation. Although, it is possible that the source tree owner may be able to negotiate alternative solutions directly with adjoining and nearby property owners. Legal and/or economic analysis of whether the BSA and NPD tests can be met is beyond the scope of this report and is likely to depend on the scope of particular source tree rule(s) and on wider pest programme factors. Nevertheless, these requirements impose limitations, and result in variable approaches across RPMPs to management of seed source trees.

Consequently, rules requiring removal of seed source conifers are most likely to only be able to be used in relation to individual trees and some smaller groups of trees or small shelterbelts. Although even for these types of source trees, it may be challenging in some circumstances. For larger areas of source trees, particularly commercial plantations and larger scale plantings, the costs of removal and the arguable lost future value mean such rules may be open to challenge and may not be feasible.

These limitations mean that wilding conifer pest programmes will likely need to include a range of regulatory and non-regulatory methods to manage source trees. Rules may need to be limited to prescribed circumstances, and operationally applied as a regulatory back-up when efforts to work with occupiers are unsuccessful. Councils may need to work directly with landowners to remove source trees over time, contributing to some of the associated costs. Rules may need to include provision for negotiated alternative pathways to compliance for denser areas of source trees, or source trees providing a practical function, such as shelterbelts.

Some examples of where Councils' wilding conifer management programmes combine regulatory with non-regulatory methods include:

a) helping the pest replicate, spread, or survive; or

b) interfering with the management of the pest.

[48] Section 73 of the BSA outlines the purposes for which RPMP rules may be developed. It includes several purposes that relate to the control of pest agents. For example, s73(5)(h) provides for rules with the purpose of "…requiring the occupier of a place to take specified actions to eradicate or manage the pest or a specified pest agent on the place".

[49] In 2 cases this is explicitly limited to publicly funded wilding control.

- Otago Regional Council – RPMP includes rules requiring removal of wilding conifers and planted pest species conifers and a pest agent rule, as well as provision for transitional agreements for removal of existing shelter belts and other small areas of planted conifers via its Biosecurity Strategy.
- Horizons – RPMP rule addresses several conifer species specified as pests – requires occupiers to notify Council of any trees of these species on their land. Council will then remove the tree(s), unless the occupier disagrees, in which case the occupier is required to remove the trees themselves.
- Environment Canterbury – there are many planted seed source trees in the small alpine community of Castle Hill. Discussion about wilding spread from them has been ongoing for many years and contorta on reserve land were removed some time ago. The RPMP now specifies more conifer species as pests and includes rules requiring removal of planted pest conifers and a pest agent rule. This has generated further discussion with the community, advice about new obligations, removal of more pest species planted source trees, and work on a management plan to remove trees over a number of successive years.

Some large areas of wilding conifers, as well as planted forests, are registered in the ETS. This adds an additional cost, and consequent challenge to their management where they are a source of wilding spread, as removing trees or 'deforestation' generates liabilities under the ETS. A 'tree weed' exemption[50] enables a pathway that avoids the payment of liabilities for cleared trees, although this exemption is only available to pre-1990 forest land. Given the way tree weeds have been defined and designated under the Climate Change Response Act 2002, this exemption is available for wilding and pest species source trees, but may also be available for planted trees that are not specified pests in the relevant PMP.[51]It isn't entirely clear whether a pest agent provision in the applicable PMP is required for the exemption to be available in the latter case, and legal advice may be required to clarify this.

As outlined above, there are some fundamental components of the BSA and NPD framework that mean there are limitations on the scope of PMP rules to address all seed source trees. These limitations present the greatest challenge in relation to commercial plantations and other larger plantings that have been legally planted and hold considerable financial and/or functional value for the owner. When considered in the wider context, this highlights the importance of the two main regulatory frameworks, the RMA and BSA, operating together and comprehensively, at both the 'front end', in a preventative manner for new plantings, and at the 'downstream end', in a proactive/early action manner, to address ongoing and historic spread.

For PMPs, at the preventative 'front end', this means a more consistent approach to preventing new plantings of low-value spread-prone species, by specifying them as pests. At the 'downstream' control end, this means having (and enforcing) wilding conifer control rules that apply generally, not just where control operations have been undertaken, to ensure inaction does not result in new wilding conifers becoming established. Having these obligations in place will also potentially incentivise landowners to seek solutions directly with source tree owners, from negotiated

[50] Section 184 of Climate Change Response Act 2002.

[51] "Tree weed" is defined in the Act as a tree that is either specified a pest in a PMP, or designated a tree weed in regulations made under the Act. Regulation 23 of the Climate Change (Forestry Sector) Regulations 2008 states that trees listed in Schedule 7 of the Regulations are tree weeds for the purposes of the 'tree weed' definition in the Act. Schedule 7 lists a considerable number of tree species, including conifer species not specified in PMPs as pests, such as Douglas fir and Radiata pine. There is no requirement that the trees be wilding or naturally regenerated, and no requirement that they are specified a pest in a PMP.

agreements around control work through to civil legal proceedings. In this way, although PMPs may not be able to address some source trees directly, they can be the lever that generates alternative solutions.

Potential Change / Action

- NZWCG advocate for Councils to take a more proactive, preventative regulatory approach to clear but vulnerable areas by developing and introducing clear land rules, and/or amending existing rules to cover all wilding conifers, regardless of species, source, or the occurrence of wilding conifer control operations. The 2016 MPI guidance material contains provisions that could be used as the basis for this – Rules 1, 2 or 3A, depending upon the nature of the RPMP programme.
- NZWCG advocate for more consistent specification of the recommended conifer species as pests in RPMPs. Although these species are unlikely to be planted for commercial purposes, they may be considered for new shelter or other small or amenity plantings. Even if RPMPs do not contain rules requiring removal of existing plantings of these species, pest specification at least legally prevents new plantings of them. This status can then often be reinforced by District Plans including provisions that prohibit the use of these species as a condition of tree planting activities.
- Councils could collectively seek a more detailed analysis of the cost/benefit tests and exacerbator pays principles that can limit options for managing wilding conifer seed source trees, particularly planted, non-pest species trees. This might include testing and analysis of different regulatory mechanisms and scenarios against applicable BSA and NPD requirements and could draw upon provisions currently included in some RPMPs, as well as more widely scoped provisions. An understanding of the effectiveness of existing RPMP provisions, and any issues that may have arisen with their implementation would help inform this.

Potential Additional and/or Alternative PMP Approaches

Potential 'front end' options if RMA framework mechanisms do not adequately address risks

The following potential options are 'front end' regulatory mechanisms that could impose restrictions on new plantings, to reduce the extent and impacts of wilding conifer spread. The value and/or feasibility of these mechanisms will depend on the extent and timing of initiatives to address the current issues, limitations, and gaps in the RMA regulatory framework relating to conifer planting (see Sections 3 and 4). Effectively preventing, mitigating, and remedying the wilding conifer effects of new conifer plantings are arguably matters more appropriately addressed in the RMA context. However, if changes within the NES-PF and District Plans are not forthcoming, or sufficiently robust and precautionary in their approach to managing wilding conifer effects, these potential options may provide regulatory mechanisms to avoid some of the potential future wilding spread risk from new conifer plantings.

1. Pest agent provisions addressing future plantings.
   Investigate the feasibility of pest agent rules that have a broader definition for 'pest agent conifer' than those currently used (e.g., include larger plantings and potentially, plantations), but apply only to new plantings from a specified date. A specified date draws a clear line in time, potentially addressing the exacerbator pays principle of not imposing costs based on legally compliant, past actions and decisions. Given that occupiers are required to comply with RPMP obligations despite other permissions (e.g., ETS registration, permitted activity plantings under

the NES-PF, consented plantings etc.), such 'future planting' pest agent rules would potentially have the effect of preventing or discouraging new plantings in the situations and/or locations where the rules apply. Or, if the rules are contingent upon wilding conifer control being undertaken on an adjoining property, would put parties on notice that trees planted within those situations/locations risk having to be subsequently removed. This type of rule could sit alongside pest agent rules that address previously planted seed source trees (which are likely to be more limited in scope given the factors outlined in the previous sections).

'Future planting' pest agent rules that are limited in terms of the situations and circumstances in which they apply, e.g., only applying within 200m of a property boundary, are more likely to be feasible than broadly applicable rules.

There is a hierarchy between different regulatory instruments that will need to be considered. Section 69 of the BSA prescribes that to the extent to which a regulation made under the BSA or any other Act is inconsistent with a rule in a RPMP, the regulation prevails. It could potentially be argued that a 'future planting' pest agent rule is inconsistent with the NES-PF regulations permitting afforestation and replanting, and therefore should not apply to NES-PF plantings. However, if these rules are limited in scope to specific situations and/or locations or areas, this argument could potentially be countered, given that the rule would not be preventing the afforestation or replanting from occurring, just limiting its extent. Legal advice on this point would be required as part of investigating this option. Should an inconsistency be confirmed, 'future planting' pest agent rules could include an exclusion for plantings covered by the NES-PF, meaning other new plantings, such as shelterbelts (and potentially permanent plantations, depending on whether changes to the scope of the NES-PF are made) would still be subject to the rules.

2. Specifying commercially valuable, spread-prone species a pest in prescribed situations.
   One of the key challenges associated with wilding conifer management is that while wilding conifers are a pest, planted conifers can be a valuable resource. This is the case for the conifer species most widely used in forestry plantations in New Zealand, Radiata pine and Douglas fir. To date, it has generally been considered untenable to specify commercially valuable conifer species as pests in PMPs, due to the impact of ss52 and 53 of the BSA, which prevent the propagation, sale, breeding, communication, and release of organisms specified as pests. Certainly, if a broad approach is taken to pest specification, such as declaring a particular species a pest within a whole region, or nation-wide, this is likely to be the case. However, consideration could be given to confining the definition of the pest to a particular geographical area or circumstances. This would confine the impact of ss 52 and 53 to the particular area or circumstances that form the definition of the pest. It may be possible to take this approach to one, or a group of conifer species, as the BSA enables a PMP to specify as a pest, an organism or organisms, or a class(es) or description(s) of organism(s). This provides flexibility and arguably enables a site or landscape-scale approach, which may better ensure 'the right tree in the right place'. An example of how this might be framed is - "Douglas fir within the High Wilding Risk Zone shown on Map X". By triggering ss 52 and 53 within the defined area or circumstances, this would prevent new plantings of the specified species in that area or circumstance.

   In terms of the relationship that this approach may have with the NES-PF, section 69 of the BSA prescribes that if a rule in a PMP is inconsistent with a regulation, the regulation prevails. However, specification of a pest in a PMP does not constitute a rule and does not generate a

requirement that the PMP contain rules for that pest, therefore this may not constitute an inconsistency.
More detailed legal analysis of this option will be required.

OTHER POSSIBLE APPROACHES AND PMP AMENDMENTS

3. For PMPs where wilding conifers are specified as pests, but rules addressing source trees have not been included, there may be potential in certain circumstances, particularly in relation to individual or small groups of trees, for Councils to utilise s122 of the BSA. This section enables management agencies to direct an occupier to take steps to prevent the spread of a pest.

4. Amend PMP definitions of 'plantation' to avoid unintended inconsistencies between permanent and production plantations.
   The MPI Project guidance material definition for 'wilding conifers' includes an exclusion for wilding conifers that occur within a 'plantation'. The intent of this exclusion is that if wildings are contained within a plantation, they are unlikely to cause any greater risk of spread than the wider plantation itself, so there is little to be gained from including them in control requirements. This definition has been adopted across many RPMPs. In addition, most of the RPMPs that have pest agent conifer provisions have excluded trees that are part of a plantation from the definition of 'pest agent conifer'. The intention behind this exclusion is that the cost/benefit tests and principles of an exacerbator pays approach mean that it would be very difficult to legally apply pest agent rules to plantations. In both situations, the term 'plantation' is defined to include that the forest "has or will be harvested or replanted".

   Since these definitions were developed, interest in permanent plantations that will not be harvested has grown, and this is likely to continue given the recent significant increase in the price of carbon units. The current 'plantation' definition has consequences in relation to permanent plantations that may not be logical or desirable. In terms of the wilding conifer definition, it means that wilding conifers that are located within a permanent plantation would not be subject to the same exclusion as wildings within a plantation that will be harvested. There seems little logical reason to treat these wilding conifers differently. A similar situation arises with the pest agent definition, in that trees that are part of a plantation intended to be harvested are currently excluded from the pest agent conifer definition, but trees that are part of a permanent plantation are not.

   Consideration should be given to amending the definition of 'plantation' used in PMPs to extend its scope to permanent plantations by removing the 'has or will be harvested or replanted' criteria.

SECTION 6: OTHER POTENTIAL OPTIONS

Project Task 6:
Outline any other potential avenues or options for addressing the Wilding Pine Network's two issues of concern that could be considered or pursued within the policy, statutory and regulatory framework relevant to wilding conifer management and prevention.

There are several additional avenues that could potentially be pursued by the Wilding Pine Network, or for which the Wilding Pine Network could advocate to be pursued by the appropriate parties, which could contribute to addressing the Wilding Pine Network's 2 primary issues of concern.

1. A National Wilding Conifer Pest Management Plan.
   The review of RPMPs addressed in Section 5 has illustrated that considerable variability remains across regions in the management of wilding conifers. Several gaps and limitations associated with regulatory management of wilding conifers in RPMPs was also outlined in Section 5. This highlighted the importance of changes to regulatory mechanisms under the RMA to better manage the wilding conifer effects of new conifer plantings, as well as the likely on-going need for both regulatory and complimentary non-regulatory methods to manage existing wilding conifers and existing planted sources of wilding conifer spread through PMPs.

   A National Pest Management Plan (NPMP) for wilding conifers could potentially address the inconsistencies and variability in wilding conifer management across regions. It may also offer a more cost-effective and efficient means of both funding and implementing methods to help prevent new areas of wilding conifers establishing, and to ensure on-going surveillance and management of wilding conifers and wilding conifer seed sources that will be necessary to, over the long term, secure the considerable public investment that has been made across numerous regions in wilding conifer control.

   The NZWCG may be a practical forum for initial consideration of the desirability and/or feasibility of a NPMP for wilding conifers.

2. Follow-up on Strategy Action 1.b. Accord.
   The NZWCMS includes the following action:
   > "Develop and agree protocols under an accord for the effective prevention and management of wilding conifer spread from planted forests, shelterbelts, amenity plantings and woodlots."[52]

   The NZWCG, MPI, local government, and forestry and farming bodies were identified as the key parties to lead this action.

   This action involves a potential non-regulatory approach to managing existing planted sources of wilding conifers. It is unclear whether this Action has been progressed at all. If not, the Wilding Pine Network could re-visit this Action and consider whether there is value in doing so. It may be more practical to focus on larger plantings, such as plantations and woodlots, so that a more targeted approach can be taken. It is possible that the Wilding Pine Network may be able to develop and agree some key protocols that could then be put forward to land and forest owners

[52] NZ Wilding Conifer Management Strategy, Action 1.b., Appendix 1.

in prioritised situations, such as where large plantings or plantations adjoin or are located close to areas where considerable public investment has been made in wilding conifer control and this may be under threat of reinfestation from those plantings. This may help to provide a level of consistency across different situations, as well as illustrating a form of industry 'good practice' if protocols are endorsed by forestry and farming bodies represented on the NZWCG.

3. FSC Responsibilities.

The Forest Stewardship Council (FSC) system is a third-party certification system for sustainable forest management practices. The National Standard for Certification of Plantation Forest Management in New Zealand is the NZ-specific FSC Standard, approved in 2013. FSC certification carries a range of responsibilities, and the NZ FSC Standard contains obligations relating to wilding conifer management under Criterion 6.9, which states –

> "The use of exotic species shall be controlled and actively monitored to avoid adverse ecological impacts."

The subsequent clauses, or 'indicators', set out specific requirements relating to Criterion 6.9. These include:

- Compliance with any applicable RPMP (Indicator 6.9.1)
- Having a Wilding Prevention Decision Support System in place and use of this prior to planting to assess the risk of wilding spread (Indicators 6.9.2 and 6.9.3)
- Where the risk of spread is high, planting shall not occur without implementation of ongoing control procedures (Indicator 6.9.4)
- If wildings are not identified in the RPMP, removal of wildings in adjoining properties before seed production where the adjoining property owner is agreeable, the wildings are clearly identified as progeny of species in the plantation, and the wilding spread has occurred after the Standard became operative (2013), or from first certification (Indicator 6.9.5)
- Monitoring and/or carrying out research to evaluate the potential invasiveness and/or other adverse ecological impacts of the species in the local area (Indicator 6.9.6)

FSC is the most popular third-party certification across NZ forests, playing an increasingly important role in forest management, with over 1 million of the 1.8 million hectares of plantation forest in NZ currently FSC certified.[53]

The responsibilities that accompany FSC certification are not always widely understood by parties outside of the forestry sector. There may be scope for the NZWCG to work more closely with the forestry industry to ensure FSC responsibilities regarding wilding conifer management are being pro-actively fulfilled. The Wilding Pine Network could also help raise awareness across Councils, community groups and other stakeholders about these responsibilities.

Given the effort to increase the uptake of wilding conifer programmes in RPMPs, and to improve consistency across these, the Wilding Pine Network could work with the forestry industry to better understand the implications of this for Indicator 6.9.5. This Indicator imposes responsibilities on forest managers to undertake wilding conifer control on adjoining properties. However, this applies "[i]n the absence of a species being identified in the regional pest management strategy…". This appears to mean that if a RPMP specifies wilding conifers as a pest, this responsibility may not apply, presumably on the assumption that the RPMP would then have rules and other methods to address wilding conifer control. However, this does not account for

[53] NZ Forest Owners Association website www.nzfoa.org.nz

RPMPs not being able to require parties responsible for the source of wilding spread to undertake wilding control on another property. The FSC requirement within Indicator 6.9.5 recognises that forest owners should be responsible for the externality effects of wilding spread from their forests. Arguably, the only RPMP-related limitation to this should be if fulfilling this responsibility is somehow inconsistent with the objectives of the RPMP wilding conifer programme. The NZWCG could advocate for the amendment of this Indicator to reflect this, and/or for an industry undertaking that this is the spirit in which the responsibility will be practically implemented.

4. Section 17 RMA – duty to avoid, remedy, or mitigate adverse effects.
In some circumstances, there may be scope to seek an enforcement order or abatement notice against the owner of seed source trees for a breach of the duty set out in s17 of the RMA. Factors such as a clear link from the source trees to wilding spread, and a clear (and more than minor) adverse effect arising as a result, will likely need to be present.

   Section 17(1) states that "[e]very person has a duty to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person, whether or not the activity is in accordance with a rule in a plan [or] resource consent ...". Although this duty is not itself enforceable, there are powers in Part 12 of the RMA to issue an abatement notice or an enforcement order requiring a person to:
   - cease doing anything that is or is likely to be …objectionable to such an extent that it has or is likely to have an adverse effect on the environment; or
   - do something that is necessary in order to avoid, remedy, or mitigate any actual or likely adverse effect on the environment caused by that person or relating to land owned by that person; or
   - remedy or mitigate any adverse effect on the environment caused by that person[54].

   An enforcement order may also require a person to meet any actual and reasonable costs and expenses incurred or likely to be incurred by another person in avoiding, remedying, or mitigating any adverse effect[55].

   This avenue could be one that the Wilding Pine Network could suggest or promote to volunteer wilding conifer control groups, landowners, and/or management agencies where there is concern about on-going infestation and/or reinfestation from particular seed source(s), particularly if the source tree owner has been unwilling to engage in efforts to agree or negotiate an alternative solution.

5. Data Collection and Management

   The analysis undertaken for this report has identified that there are 2 key factors that present particular challenges for effective wilding conifer management, and which are at the heart of the Wilding Pine Network's 2 issues of concern. These are – new afforestation and plantings with insufficient wilding conifer prevention and mitigation measures, and ongoing management of areas of existing planted seed sources. Both pose a risk of new wilding conifer spread and infestation and/or of reinfestation of cleared areas.

   An important factor in supporting changes to policy and regulatory settings is understanding the scale, and in this instance, the location, of particular issues. A better understanding of where new afforestation and larger conifer plantings are occurring, and where existing seed source areas are

[54] Sections 314 and 322, RMA
[55] Section 314(d) RMA

located, will help inform decision-making and prioritisation around wilding conifer control and pest management programmes, as well as policy and regulatory changes.

The NZWCG could advocate for the development of a geo-spatial or data management tool that integrates data for wilding control operations, existing seed source areas, and new conifer plantings and afforestation. This may be able to build on monitoring and mapping initiatives undertaken as part of the national control programme and is a logical extension of actions identified in the NZWCMS relating to consistency in monitoring and mapping of wilding conifers.[56]

[56] NZWCMS Actions 3.2a and 3.2b.

SECTION 7: RATIONALE FOR CHANGE

Project Task 7:
Outline the main components of the rationale(s) for seeking change to address key gaps and limitations in the current framework and/or its implementation. This may assist the Wilding Pine Network to establish a baseline 'position' to inform its initiatives.

NZWCG needs to be clear and specific about its areas of concern and the focus of its advocacy. A constructive and pragmatic approach will also be required, as achieving 'certainty' in relation to the Wilding Pine Network's 2 key issues of concern may be difficult, but considerable improvement is possible. As is often the case with complex resource management issues, there is also no 'silver bullet' or single change that will resolve the issues, but rather changes and ongoing action across several areas will be necessary.

However, the key gaps and limitations in the current framework addressed in this report can broadly be separated into those within the RMA framework, and those relating to PMPs under the BSA. Changes to address these gaps and limitations are central to addressing the Wilding Pine Network's 2 key issues of concern, and therefore should be a priority for the Wilding Pine Network. Key components of the rationale for change in these two areas are set out below.

1. Significant time, effort and money has been spent in many regions on wilding conifer control. In some areas this has increased significantly with the implementation of the National Wilding Conifer Control Programme, which currently facilitates the spend of over $100M on coordinated wilding conifer control. Failing to heed the lessons of the past or to address the current gaps and limitations in the regulatory frameworks puts this investment in jeopardy and risks an ongoing cycle of 'legacy' wilding conifers.

2. Changes are needed to RMA mechanisms (the NES-PF, District Plans) to establish a more precautionary approach to afforestation and to ensure gaps relating to other new conifer plantings are addressed. Key components of the rationale for these changes include:
   - Wilding conifer spread can have adverse effects on a range of different values. These effects are often ongoing, cumulative, long-term, and costly to remedy.
   - The primary opportunity within the regulatory frameworks to ensure that effective measures to prevent, mitigate, and remedy wilding conifer spread effects are cost-effectively and equitably implemented or imposed, is at the time of planting. Subsequent opportunities are limited to non-existent.
   - History has clearly (and expensively) illustrated that a lack of precaution or requirements at the time of planting in relation to species, location, and prevention and mitigation measures (as well as a lack of early action to remedy wilding conifer spread that does occur), leads to a 'legacy' of complex and very costly problems.
   - Current policy settings that incentivise afforestation, combined with regulatory gaps and limitations, and permissive regulatory baselines, put current investments in wilding control at risk and create a real risk of history repeating.
   - A permissive and enabling approach to new conifer planting that does not ensure equitable responsibility for preventing and mitigating externality effects of wilding conifer spread, does little to incentivise research and development into alternative species, hybrids or sterile trees.

- Adaptive management approaches, as are sometimes used in relation to other resource management activities are not practical in the context of afforestation. This makes a precautionary, preventative approach to wilding conifer spread at the initial planting stage even more important.

Recent increases in new afforestation have resulted in growing concerns in some rural communities. A range of social, economic, and environmental issues and concerns are being raised. It may be prudent for the Wilding Pine Network to maintain a focus on the importance of effectively and equitably managing the potential wilding conifer effects of new conifer forests, whether they are production or permanent carbon forests, and to avoid being drawn into judgements about the merits of either, or the wider issues relating to land use change.

3. Changes are needed to address inconsistencies, gaps, and limitations within RPMPs. Key components of the rationale for these changes include:
   - In the absence of sterile trees, there is likely to always be some wilding conifer spread. Inaction and a lack of regulation requiring early action to clear wilding conifers have contributed significantly to current and historic wilding conifer spread. Ongoing lack of action over time results in exponential increases in the costs of control. Broadly applicable obligations to clear wilding conifers before coning are therefore important to avoid new and repeat infestations.
   - Imposing obligations on 'receiving' landowners may incentivise the initiation of privately negotiated alternative arrangements that impose the costs of wilding control more equitably than the regulatory framework is able to.
   - Existing wilding seed source areas can be complex to manage but addressing them is fundamental to the long-term effectiveness of wilding conifer pest programmes. A collective approach by management agencies may enable better evaluation of new and/or innovative options for managing seed source sites.
   - Taking a more flexible but specific approach to pest specification of commercially used species, based on sound knowledge of species spread characteristics and environmental vulnerabilities, could be an important factor in ensuring "the right tree in the right place".

4. If both the RMA and BSA frameworks are applied effectively, without significant gaps, they have the potential to ensure a more equitable outcome in terms of where the costs of wilding conifer control fall over the long term, both through the application of regulatory mechanisms, and through those mechanisms incentivising alternative outcomes such as occupiers negotiating and implementing private agreements, or the use of less spread-prone trees, or alternative land use that may have more manageable effects in the particular environment.