



"The threat is real – 130,000 wildings have been removed by the WCG from the Remarkables over the last decade, and with a warming climate, wildings are being found at higher and higher levels – they even grow out of cracks in the rock! They will inevitably change the look of this iconic mountain range if they are allowed to flourish."

Peter Willsman, WCG Founding Chairman



"Our highly memorable landscapes are admired by countless Kiwis and visitors and impact powerfully on both imagination and memory. The fast spread of wilding pines is an immediate and dangerous threat to these beloved landscapes. In ten years any one wilding can become one hundred, then one thousand. We have to do all we can to prevent this evergreen blanket turning our extraordinary landscapes from "A World of Difference" to a look shared by too many other regions."

Sir Grahame Sydney KNZM, ONZM

ACKNOWLEDGEMENTS

The Whakatipu Wilding Conifer Control Group Inc (WCG) partners with key stakeholders: Queenstown Lakes District Council (QLDC), Department of Conservation (DOC), Otago Regional Council (ORC) and Land Information NZ (LINZ).

The WCG has relationships with the Ministry of Primary Industries (MPI) – Biosecurity New Zealand, the Wilding Pine Network, landowners and land managers, Whakatipu conservation groups, and is supported by local businesses and the community.

STAKEHOLDERS:









KEY PARTNERS:





SUPPORTERS:









LANDOWNER SUPPORTERS:

There are many landowner or land manager supporters in the Whakatipu area who recognise that wilding seed knows no boundaries and that collaboration is key to wilding control. Our sincere thanks go to all Whakatipu landowners supporting the wilding control programme.

This Strategic Plan was developed by a subgroup of the WCG Executive led by Jon White and included Peter Willsman, Dick Hubbard and Graeme Watson.

Kāi Tahu

This Strategic Plan acknowledges Kāi Tahu as mana whenua in the Whakatipu area. Kāi Tahu view their existence as intrinsically linked to te taiao (the natural world) through whakapapa. These links dictate the Kāi Tahu attitude to natural resource management, which is their kaitiakitaka (guardianship) duty to protect the mauri (life force) of te taiao for future generations.

Toitu te whenua, toitu te moana, toitù te tangata. If the land is healthy and the sea is healthy, the people will thrive. Ben Lomond looking towards Tāhuna / Queenst

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EXECUTIVE SUMMARY

There is no time to waste

The wide-ranging negative impacts of wilding infestations have been amply demonstrated and acknowledged at all levels in many parts of the country, nowhere more so than in the Whakatipu area. Left unchecked, wilding infestations will permanently change our iconic environment, overwhelming native vegetation and impacting views which attract so many to live in and visit this special place.

Since the WCG's inception as a volunteerrun community group established by the Queenstown Lakes District Council in 2004, over \$26m has been spent on wilding control in the Whakatipu area. While substantial progress has been made to achieve the WCG's goal of wildings being under control in the Wakatipu, much remains to be done.

Public awareness and acceptance of the need for wilding control has grown significantly over time, along with that of landowners and land managers. Improved capacity and techniques have seen control efforts increase and become more effective, although fit-for-purpose regulatory provisions and enforcement remain aspects to be strengthened.

This 2023-2033 WCG strategy envisions wildings being under control (not eradicated) in a 10-year timeframe. A robust ongoing maintenance programme will always be required. While a formidable challenge, this will be made more achievable by the adoption of a near-term vision of controlling wildings in strategic priority locations. This means targeting coning wildings in exposed upwind locations which spread seed onto vulnerable land over the initial years of the strategy.

Only if the seed rain from these 'super spreaders' can be eliminated, or at least minimised, is there an opportunity to get on top of this pernicious problem.

Of all the factors which can impede progress towards achieving the vision, the most significant is funding. The funding of wilding control at a realistic level must be seen as an investment which secures and builds on the gains made as a result of the programme to date. To do otherwise means that the \$26m expenditure is at risk of being wasted, with an exponentially more expensive future programme required.

There is no time to waste. Every opportunity unable to be taken to remove priority seed sources, means infestations continue to spread, grow and distribute more seed.

In addition to wilding control, there are three other critically important elements in this strategy:

- community engagement and support;
- landowner, stakeholder and partner support;
 and
- funding security.

Integrated activities across all these elements will give the best opportunity to achieve the goal of wildings under control in the Whakatipu and preserve our environment for present and future generations.



Grant Hensman Chair, WCG

INTRODUCTION

The Whakatipu Wilding Control Group (WCG) is a charitable community trust established for the purpose of controlling wildings in the Whakatipu area.

The WCG Executive is made up of nonremunerated trustees drawn from the community with a wide range of knowledge and experience who are dedicated to the long-term goal of seeing the iconic landscape of the Whakatipu preserved against the invasion of exotic wilding conifers also known as wilding pines. The WCG aims to win 'hearts and minds' in the fight against wilding pines.

Context of the 2023-2033 Strategic Plan

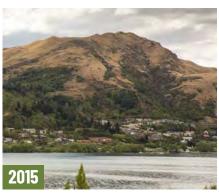
This is the fourth WCG Strategic Plan. The first (2004) and second (2008) strategies were followed by the 2013-2017 Strategic Plan. There are consistent themes apparent in all three of these prior strategies, and which continue in this strategic plan.

The comprehensive nature of the 2013-2017 Strategic Plan enabled the Executive to use it as a basis for the Trust's work beyond its stated time span, and much of the information provided in that strategy remains current. It was recognised that an updated plan was necessary to position the WCG for future decision-making, including necessary lobbying and advocacy for funding, and an updated document to prioritise the use of limited funding.

From 2004 to 2023 a total of \$26m of expenditure has been invested in wilding control in the Whakatipu area with substantial progress being made as exemplified in the following comparative photographs.











Purposes of the Plan

As a non-statutory document, this Strategy acts as:

- a primary reference for Executive decisionmaking
- guidance for developing annual operational plans
- communication to funders, stakeholders, partners and landowners
- education for all relevant parties
- assurance that funds provided are being used to best effect.



Wildings cost New Zealand millions of dollars every year in lost primary production and reduced water availability in sensitive catchments, affecting irrigation and hydrogeneration. In addition to direct economic adverse impacts, wildings affect taoka species and habitats, the mauri and hauora (life force and health) of wai Māori (freshwater), and sites and areas of significance for Mäori (wahi tüpuna), with the cost of control increasing 30% every year treatment is delayed. Wildings may also increase the intensity and hazard of wildfires. Live trees can burn more intensely than dry wood.

"In 2011, a survey calculated that wildings had occupied five percent of New Zealand, and each year were adding a further 90,000 hectares ...By 2016, escapees from exotic plantings had spread over 1.8 million hectares – more than all commercial forests combined. A 2018 study by Sapere Research found that doing nothing would see another 5.5 million hectares of New Zealand covered in wildings within 30 years."

Dave Hansford, NZ Geographic Issue 171 "The March of the Pines"

"There can be no half-measures... because wildings don't share. It'll end up being this monoculture of pines throughout the country."

Sian Reynolds, co-ordinator of the Boffa Miskell wilding eradication programme on Molesworth Station, ibid.

The National Wilding Conifer Control Programme

The National Wilding Conifer Control Programme is a collaboration across central and local government, industry, mana whenua, researchers, farmers and communities, led by Biosecurity New Zealand, part of the Ministry for Primary Industries (MPI).

Under the Programme, Biosecurity New Zealand works in partnership with the Department of Conservation (DOC), Land Information New Zealand (LINZ), and the New Zealand Defence Force (NZDF). It is delivered locally through Regional Councils, Runanga and community groups such as the WCG.

"The collaborative approach to this huge problem has been extremely effective... but there is still a lot to be done:

- Locking in the benefits (maintenance control)
- Dealing with areas not yet in the programme
- Minimising residual seed sources
- Research and planning to minimise future costs and facilitate restoration
- Transitioning to future management arrangements"

(Adapted from a presentation by Sherman Smith, Biosecurity New Zealand, at the Wilding Pines Conference 2022)

Guiding the Programme is the New Zealand Wilding Conifer Management Strategy 2015-2030, a non-statutory document which aims to prevent the spread of wilding conifers, and contain or eradicate wilding infestations by 2030. It supports regional, local or organisational planning, prioritisation and co-ordination by addressing issues at the national level. The strategy's vision is "The right tree in the right place".

The WCG's operations receive funding under the Programme through Biosecurity New Zealand/MPI and the Otago Regional Council (ORC) as Fund Manager. Vertical alignment between the three primary levels in terms of authority, instruments, understandings, research and coordination in wilding control is essential, along with coordination across physical boundaries at a local level.

National: - MPI/Biosecurity NZ	National Wilding Conifer Control Programme New Zealand Wilding Conifer Management Strategy 2015-2030
Regional: - Otago Regional Council - Other regional councils	ORC Regional Pest Management Plan 2019-2029 ORC Regional Strategy on Wilding Control (in progress)
District: QLDC Local: WCG	QLDC – relevant documents WCG Strategy 2023-2034

Otago wilding conifer management relationships

There are several community organisations leading wilding control in the lower South Island in addition to the WCG. These include the Central Otago Wilding Conifer Control Group is based in Alexandra, and the Southland-based Mid Dome Wilding Trees Charitable Trust.

A new wilding group has recently been formed called the Upper Clutha Wilding Tree Group based in Wanaka. The jurisdictions of each wilding control group collaborate to coordinate efforts at the boundaries.



The importance of a fit-for-purpose legislative and regulatory environment with respect to plantation forests to support effective education and ultimately enforcement where necessary cannot be overstated.

The Otago Regional Pest Management Plan 2019-2029 (ORPMP) gives effect to the Biosecurity Act 1993, enabling regional councils such as the ORC to develop the ORPMP. Wilding conifers are identified under "Progressive Containment Programmes: to contain or reduce distribution of the subject, or an organism being spread by the subject, to an area over time", recognising that despite being well established it is feasible to reduce their present infestation levels.

In conjunction with the ORPMP, the ORC has a Biosecurity Strategy setting out the tools for biosecurity management using the range of statutory and non-statutory, regulatory and nonregulatory tools available.

The ORPMP references the New Zealand Wilding Conifer Management Strategy 2015-2030, the Queenstown Lakes District Council Parks and Open Space Strategy 2017 which seeks collaborative action on pest management activities in the district, as well as the 2013-2017

Wakatipu Wilding Conifer Control Strategy, the latter superseded on adoption of this strategy.

The ORPMP identifies the wilding conifer species in the Table below as pests, noting that pinus contorta is specifically defined as an "unwanted organism" under the Biosecurity Act 1993 and "is prohibited from sale, propagation or distribution". Wilding conifers are defined as:

"...any introduced conifer tree, including (but not limited to) any of the species listed (in the following table), established by natural means unless it is located within a forest plantation, and does not create any greater risk of wilding conifer spread to adjacent or nearby land than the forest plantation that it is a part of. For the purposes of this definition, a forest plantation is an area of Iha or more of predominantly planted trees. This also excludes planted conifers of less than Iha, such as windbreaks and shelterbelts existing before March 2019." **ORPMP (p.26)**

Therefore, Pinus contorta aside, being identified as a pest conifer species does not mean they cannot be planted. The classification "does not include specimens used or intended to be used for plantation forestry purposes in a plantation forest". (ibid)



Common name	Scientific name	Otago Regional Pest Management Plan - Recognised wilding conifer species:	QLDC Proposed District Plan - Planting of the following trees is prohibited:
Bishops pine	Pinus muricata	X	X
Contorta(lodgepole) pine	Pinus contorta	X	X
Corsican pine	Pinus nigra	X	X
Douglas fir	Pseudotsuga menziesii	X	X
Larch	Larix decidua	X	X
Maritime Pine	Pinus pinaster	X	X
Mountain pine and dwarf mountain pine	Pinus uncinata and pinus mugo	×	X
Ponderosa pine	Pinus ponderosa	X	X
Radiata pine	Pinus radiata	X	X
Scots pine	Pinus sylvestris	X	X
Other trees listed include S Boxthorn, Buddleia, Grey w Cotoneaster, Rowan and Sp	illow, Crack willow,	×	×

Planting of the species in this table has been prohibited since 2007 and no application for resource consent can be accepted, except where the National Environmental Standard for Plantation Forestry prevails.. Rule 34.4.1 states that "the planting of pinus radiata is

discretionary, except for Plantation Forestry where the Resource Management (Resource Management (National Environmental Standard for Plantation Forestry) Regulation 2017 prevails." Rule 34.4.2 states "planting of the following trees (see table above) are prohibited." The Otago Regional Council is currently working through its regional wilding conifer strategy. Elements under consideration include:

- Ensuring monitoring of wilding spread is more consistent and complete
- Improving the understanding of wilding seed sources
- Strengthening public awareness and acceptance for wilding control
- Undertaking cost-benefit analysis of wilding control
- Advocating for continuing and sufficient national funding
- Improving the level and coverage of publicly-

- funded control work in the region
- Assessing the adequacy of existing regulatory controls
- Strengthening compliance efforts
- Supporting consistency amongst the region's territorial authorities.

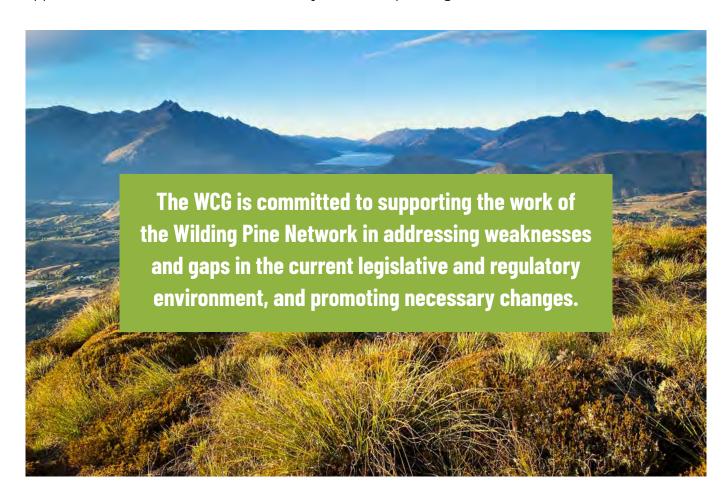
"Because radiata and Douglas Fir are still planted in forestry, I don't know if we could ever be wilding free.... but we can have proper regulations, so we don't need this huge control programme forever."

Rowan Sprague, advisor at the former New Zealand Wilding Conifer Group, from NZ Geographic Issue 171 "The March of the Pines"

Other instruments and agencies which support wilding control

The Overseas Investment Act 2005, administered by the Overseas Investment Office (part of Toitu Te Whenua/Land Information New Zealand) assesses applications for consent for overseas persons who propose investing in inter alia New Zealand's sensitive land. To be granted consent, applicants must deliver benefits. These may

include pest control or protecting and enhancing indigenous vegetation. The OIO compliance role is to make sure commitments made are kept, including through site inspections, investigating possible breaches and taking enforcement action with a variety of tools and powers available when responding to breaches.



Carbon sequestration

Overall, wildings don't help New Zealand's climate change goals. Their sequestration value is far outweighed by their numerous negative impacts.

The carbon sequestration value in controlling wildings and simply allowing, for example, tussock grasslands to regenerate cannot be underestimated. It has been demonstrated that, over time, native regeneration can and does occur given the chance, and that native vegetation consistently sequester over a longer

period of time than exotic, including commercial plantation forests. Importantly, native trees ensure biodiversity is safeguarded for future generations.

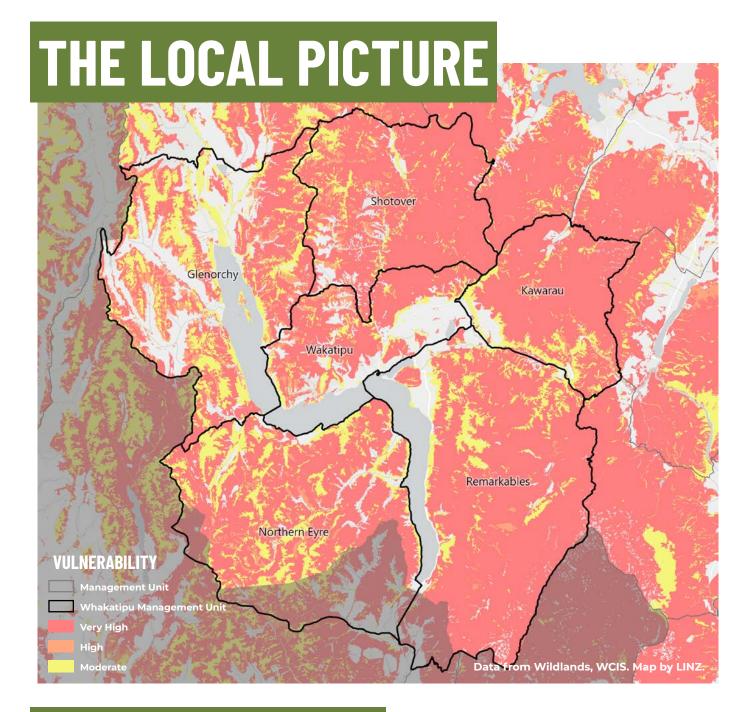
In general, wilding forests are ineligible to be registered as post-1989 forests in the Emissions trading Scheme (ETS), so new and emerging wilding conifer forests have no ETS value. (Sapere study, 2018)

Wilding Pine Network

The Wilding Pine Network (WPN) is a national advocacy and advisory group comprised of organisations and individuals involved in wilding conifer management and research. The WPN's action orientation aims to raise awareness of the wilding conifer issue, advocate for funding for control, promote effective legislative and regulatory provisions, and provide nation-wide coordination of, and advice to, community groups like the WCG.







Wildings in the Whakatipu environment

Wilding conifers flourish and proliferate in the Whakatipu environment. Douglas-fir in particular are not fussy about soil composition and moisture content. They are shade-tolerant so coning and seed production comes sooner, and threaten what native vegetation remains. The lightness of the seed coupled with prevailing winds distribute seed 'rain' far and wide. Lack of natural controls compared with the North American origin of exotic species like Douglas-fir mean they thrive in the sub-alpine Whakatipu environment and, left uncontrolled, obliterate native vegetation over time.

Compounding the problem of faster maturity and high, lightweight seed production is the ability of wilding conifer seed to remain viable in the ground for years after being deposited far from source infestations. The resulting 'legacy' seed, especially on vulnerable shrub and tussock lands, give rise to the need for treatment and sustained retreatment, all of which emphasises the necessity of targeting and eliminating upwind seed sources. This especially includes the worst seed spreader of all, pinus contorta or lodgepole pine. The map above indicates the vulnerability of the Otago environment to wilding infestation.

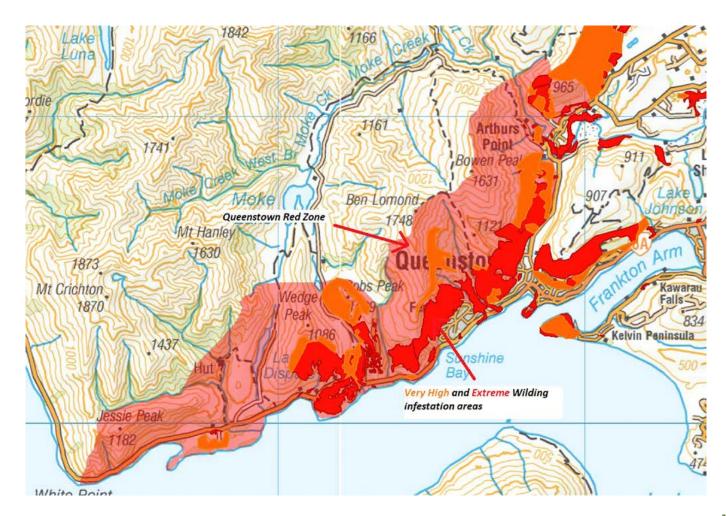


The proliferation of wildings, especially in the Whakatipu significantly adds to the fuel available to a wildfire. They tend to grow densely, with canopies touching in large tree infestations, facilitating the movement of wildfires. Wildfires moving through these dense wilding forests often leave just the trunks standing.

As wildings grow, dry material in the form of small branches, cones and needles gather on

the ground beneath them and can provide the easily combustible material leading to wildfires. As human activities increase in wilding forests, especially in urban-rural settings, so do wildfire risks.

The map below overlays wilding infestations in and around Queenstown with the Fire and Emergency New Zealand 'Red Zone', indicating the area where the fire risk is significant.



The WCG's role in restoration

The WCG's mandate is to control wildings which enables restoration and revegetation whether natural or otherwise. This facilitates the work of groups focused on planting like the Wakatipu Reforestation Trust (WRT), or where planting is included alongside their control work, such as the Arrowtown Choppers. The WCG is an essential part of the conservation effort, and networks with other conservation-minded organisations and groups. Where possible, WCG operations protect existing remnants of native vegetation enabling their survival and eventual expansion.

There is a jointly commissioned management plan with the QLDC with respect to Queenstown Hill (108ha) which requires a revegetation plan before conifer control can commence. The WCG has also commissioned an options and issues report regarding the Public Conservation Land (PCL) at the Seven Mile Recreation Reserve. This report is to support the management of the



conifers at this popular walking and mountain biking reserve. The WCG believes its primary role in wilding control enables preservation of native vegetation and revegetation on a potentially greater scale than any other initiative.

10-year vision

Wildings are under control in the Whakatipu

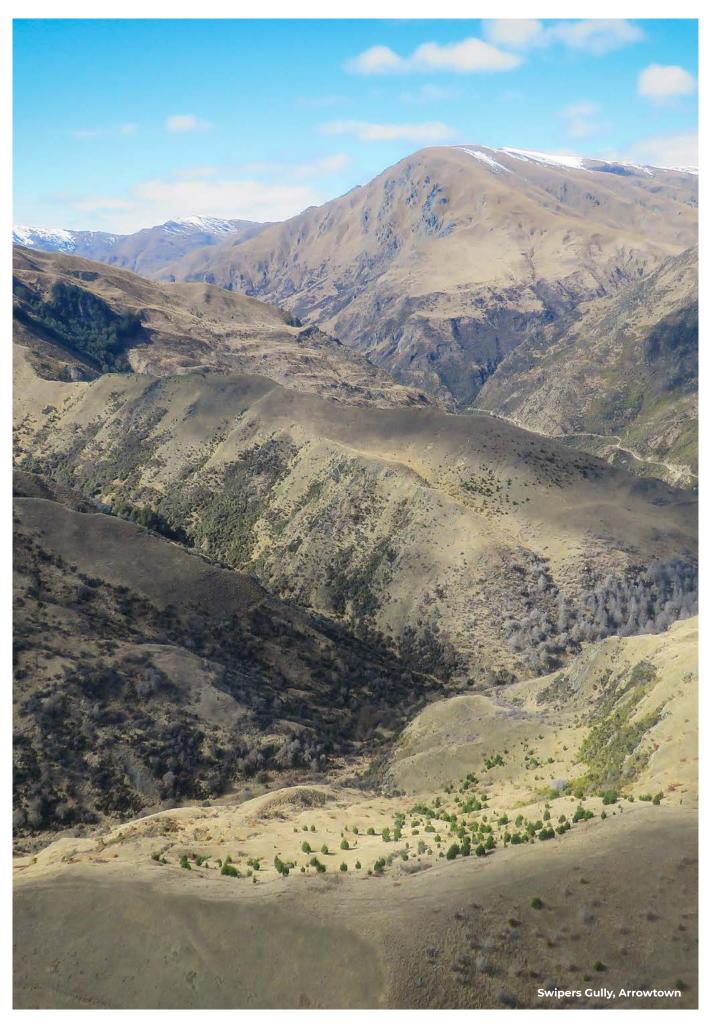
While the WCG acknowledges the control of wildings in the Whakatipu area is hugely challenging, it is firmly believed control is possible in the long term and becomes attainable with sufficient funding and if all those responsible for land ownership and management play their part.

WCG near-term vision

Wilding infestations in identified strategic priority locations in the Whakatipu are under control

"Under control" is defined as the threshold of control is reached where minimal ongoing maintenance and treatment is required.

This Plan recognises the challenge in achieving full control of wildings in the Whakatipu when it is well known there has been a massive amount of seed rain over the years, and often multiple retreatments have been required with respect to previously treated infestations. A near-term vision targeting control of the infestations in identified strategic priority locations has therefore been adopted. These locations have been identified according to the "4S Model" criteria described on page 17.



The four elements of this strategy

- 1 Wilding conifer control
- 2 Community engagement & support
- 3 Landowner, stakeholder & partner support
- 4 Funding security

Of these, wilding conifer control is the primary and central strategy area of the WCG – this is the purpose of the WCG's existence.



STRATEGY ELEMENT ONE: WILDING CONTROL

TREESPECIES

SPREAD HE STATE

The NZ National Wilding Conifer Management Strategy identifies (at p.19) the need to: "Prioritise wilding infestations based on best information available, to inform allocation of funding and effort."

The WCG Operations Manager Will McBeth developed a tool for the purpose of rating the risk posed by wilding infestations in the Whakatipu.

Having assessed the relative risk of these infestations, criteria were identified for determining which of these was a strategic priority for treatment or retreatment.



INFESTATION RISK

Extreme - E.g. large coning trees in exposed settings with downwind vulnerable locations

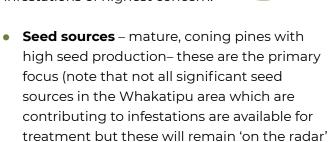
Very High - E.g. dense to semi-dense infestations contributing to significant seed spread

High - E.g. known uncontrolled sporadic infestations with multiple nearby seed sources

Moderate - E.g. low or unknown infestation/seed levels but low confidence the area is under control or clear Low - E.g. reasonable confidence there are no or low numbers of wildings or seed sources.

The 4S Model

The 4S Model reflects the criteria the WCG uses to determine strategic priority locations amongst the infestations of highest concern.



Species – priorities for the Whakatipu:
 Douglas-fir, Contorta (Lodgepole), Corsican,
 Scots, Larch, Mugo and Mountain pine.

for future control opportunities).

- Spread factors the critical impact of prevailing winds, especially where mature, coning trees are located at take-off points, and where these converge to infest vulnerable downwind land.
- Status of control the extent to which previous and current treatments have achieved control (or the need for retreatment/s), as well as known infestations yet to be controlled.

"Going hard and early on targeting and removing upwind seed sources is critical to the success of control measures, otherwise it's like forever bailing a leaky boat." Grant Hensman, WCG Chair



Each year, an Operations Plan is developed by the WCG Operations Manager in conjunction with MPI/Biosecurity NZ, supported by the WCG Funding Manager, which is submitted for the approval of MPI/Biosecurity NZ, ORC as Fund Manager and the WCG Executive. This plan sets out in a level of detail how strategic priority locations will be targeted as far as possible, and forms the basis for monthly activity reporting against the amounts budgeted, including the number of hectares controlled. Of necessity, some flexibility is required due to operational constraints, weather impacts, land owner consent, equipment availability and budgetary limitations.

This Strategy envisages extending this reporting to include activities targeting strategic priority locations i.e. significant upwind seed sources.

Health and safety

The health and safety of all those involved in wilding control, from staff and contractors through to casual volunteers is of paramount importance to the WCG. The WCG Executive receives monthly reporting on health and safety incidents including near misses. Operational work is regularly audited and areas requiring strengthening are rectified. Wilding control activities undertaken by WCG / DOC contractors are publicly advised, and any operations are carefully managed to ensure the safety of the public.

There are a variety of methods available for wilding control. The method/s used depends on a number of factors including the species and their age, location and density. Methods range from ground-based to aerial work, from hand-pulling small wildings to the application of herbicide into or onto the bark of individual trees.

The Wilding Pine Network published in September 2022 "Wilding Pine Control Guidelines: A guide to choosing the right control method". These Guidelines complement the Good Practice Guides produced by the National Wilding Conifer Control Programme which provide detailed instructions on control methods based on best practice.

Harvesting

Unlike well-managed plantation forestry, wildings are self-seeded and are rarely a usable resource. Where possible, income from the sale of wildings will be used to defray control costs where possible but there are significant challenges. Accessibility for road transport-based extraction is a key factor, as are log prices whether domestic or international.

Some limited uses for felled (not herbicidetreated) wildings come in the form of firewood, fence posts and essential oil. Potential use for biofuels remains in prospect at this time.

Handback

The concept of handback to local management following control treatment(s) has historically been central to wilding control strategies but faces significant challenges.

The overriding need is to ensure any handback is sustainable, along with landowner commitment to future monitoring and retreatment. In the WCG's experience, the majority of landowners take thoughtful responsibility to care for the environment and stewardship of their land.

The need for all to play their part is critical to the concept of handback: a controlled area with an uncontrolled neighbouring seed source cannot be considered controlled in the long term.

Importance of research

Research is vital to inform best and evolving practice.

Much of the research in relation to wildings is conducted by Scion, formerly the Forestry Research Institute. For example, 'Vive la Resistance' is an MBIE-funded programme focusing on understanding and preventing re-invasion of wilding conifers and building on the research of the Winning Against Wildings programme.

In operational control areas, even where control of wilding conifers is effective, there is a high likelihood of re-invasion of wildings either from a surrounding seed source or from wilding

seeds in the seed bank. Therefore, our wildings management programme is at risk of having to commit to long-term maintenance control to continually clear re-invaded areas. By using the National Wilding Conifer Control Programme as a large-scale operational field experiment, coupled with controlled experiments and modelling, this research will quantify the risk of conifer re-invasion and identify optimal strategies to prevent it.

There is also research being undertaken at Scion on low coning conifer species to reduce the spread of seed from forestry plantations, and from wildings in turn.

KEY PRIORITIES

Key priority areas of focus for this strategy element include the following:

- Targeting strategic priority locations using the 4S model
- Undertaking follow-up control as necessary
- Monitoring for emerging infestations and applying best control options
- Collaborating with others on control operations as opportunities arise.



STRATEGY ELEMENT TWO: COMMUNITY ENGAGEMENT & SUPPORT

The WCG is acutely aware of the need to build and maintain "social licence" in controlling wildings, especially in areas of high visibility. The WCG is part of the Whakatipu Conservation Alliance which includes the Whakatipu Reforestation Trust, Whakatipu Wildlife Trust, Southern Lakes Sanctuary, Kea Conservation Trust, Mana Tāhuna, Te Tapu o Tāne and Friends of Tuckers Beach.



Every year the WCG holds a public 'Reporting to the Community' event where an update on the year's activities and overall progress is provided. An expert speaker gives perspectives on wilding control and an opportunity is extended to network with others, especially representatives of relevant agencies and landowners.

WCG volunteer co-ordinator role

The position of Volunteer Co-ordinator was established in January 2021. The purpose of the position is to lead the co-ordination of volunteers participating in wilding control work for the WCG, including managing the Adopta-Plot programme on the Ben Lomond track, organising volunteer events and associated logistics, and maintaining the WCG's tools and equipment.

The Volunteer Co-ordinator also manages the health and safety agreements with DOC and QLDC relevant to the contributions of volunteers. The Volunteer/Community Agreement with QLDC states that: "The parties have entered this Agreement on a spirit of collaboration to enhance open spaces for the purpose of recreation, preservation, conservation and community wellbeing."

The Agreement recognises volunteers are important and provide: "... a valuable service to the District and those living here. The Agreement seeks to provide a balanced framework to keep our volunteers work and workplaces healthy and safe."

Similarly, the Community Agreement with DOC is entered into: "... in a spirit of collaboration to make a difference to conservation."

The Agreement recognises that New Zealanders: "... want to connect with and contribute their expertise to restore & protect their unique natural environment, historic and cultural heritage."

This Agreement covers volunteer work at the Ben Lomond Scenic Reserve and the Moke Lake and Lake Kirkpatrick Recreation Reserves.



There are 45 plots each of approximately one hectare adjacent to the Ben Lomond track adopted by a wide range of individuals, clubs, groups, businesses, organisations and community groups. Plots are visited regularly to keep them clear of wildings so that the beech forest remnants, shrublands, tussock grasslands and subalpine herb fields can flourish. Plots are monitored so that assistance can be provided

where wildings are too large for hand tools, or legacy seed is generating wildings at a pace requiring more hands to keep under control.

This programme is considered a stunning success, engendering a strong and enduring sense of commitment in plot holders to maintain their plots. A map showing the boundaries of the plots is attached at Annex 1.

Educational initiatives

The Volunteer Co-ordinator also arranges for educational initiatives combined with wilding control work for a range of groups including visiting student and conference groups that are keen to add a conservation-related contribution during their visit to Queenstown. This has become a popular addition in recent years and is expected, indeed encouraged, to continue.



Social media

The WCG website serves as a primary means of communication with subscribers and those interested in the WCG's work. Regular newsletters to subscribers provide news, developments and important information.

The WCG initiated its Facebook presence in 2019. Initially focused on communicating information about volunteer events, page content has since expanded to include a range of information, work programme notifications and educational videos.

The WCG engaged a social media expert who launched a "Wilding Wednesday" initiative in 2022 to build public engagement by providing regular posts. A subsequent review found that engagement had increased significantly and positively as a result, including with community organisations undertaking similar or complementary work, such as the Arrowtown

Choppers and the Whakatipu Reforestation Trust. The Facebook page policy was updated in 2022, with its purposes updated to the following:

- Extend public engagement, participation and education with respect to wilding control in the Whakatipu Basin
- Provide a ready access point to the WCG for those who prefer Facebook
- Communicate information, photos, news and notifications of operations and track closures
- Promote events such as volunteer field days.
- Recruit volunteers, supporters and potential Executive members.

The WCG intends to expand its social media presence to include Instagram and Linkedin.

"Every contribution to wilding control counts."

Suzanne Rose, WCG Funding Manager

KEY PRIORITIES

Key priority areas of focus for this strategy element include the following:

- Raising awareness and a sense of urgency
- Emphasising all contributions count: every wilding removed is a future cost saved
- Educating the community, and motivating to take action
- Building a passion for maintaining the environment, and being part of a growing conservation network.



STRATEGY ELEMENT THREE: LANDOWNER, STAKEHOLDER & PARTNER SUPPORT

The WCG greatly values the support provided by landowners and managers, stakeholders and partners with respect to wilding control. The WCG acknowledges the critical importance of collaboration with the Otago Regional Council (ORC), Queenstown Lakes District Council (QLDC), the Department of Conservation (DOC) and Land Information New Zealand (LINZ), and the application of available enforcement powers.

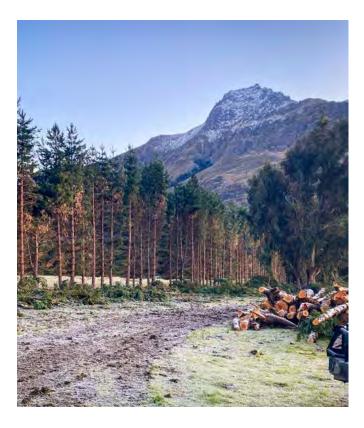
Landowners

Landowners and land managers play a vital role in wilding control. The WCG has found there is generally a willing acknowledgement of the role they have to play.

The WCG Funding Manager and Operations Manager are at the forefront of relationship building with landowners or their representatives, providing information and advice. This has extended to assisting with the planning and timing of control operations.

As has always been the case, wilding control on one property cannot succeed if a neighbouring property fails to undertake control, especially if it is an upwind seed source.

The ORC Regional Pest Management Plan adopted in 2019 instituted "Good Neighbour Rules" (along with other Rules) requiring all landowners, including the Crown, to match the control efforts of their neighbours within specific distances so that their efforts are complementary. Within the Otago region, occupiers are required to "eliminate all wilding conifers present on land they occupy within 200m of an adjoining property boundary prior to cone bearing where:



- The adjoining land has previously been cleared through control operations since January 2016; and
- The occupier of that adjoining land is taking reasonable steps to manage wilding conifers on their land within 200m of the boundary. The WCG consider this requirement should be strengthened by increasing the distance as windblown seed knows no boundary.



Stakeholders

The WCG's stakeholders are QLDC, DOC, ORC and LINZ, all of which contribute funding and other support to the WCG. Each of these organisations has roles to play in educating and promoting voluntary compliance. They also have roles in enforcing laws, regulations, consents and other legal requirements.

The WCG acknowledges the role QLDC played in initiating the WCG, and its continuing annual contributions and administrative support. The WCG also acknowledges DOC's support for the work of the WCG as the primary contractor for wilding control operations and its support in other ways.

Partners

The WCG's partners include the Ministry of Primary Industries - Biosecurity New Zealand which manages the National Wilding Conifer Control Programme, and the Wilding Pine Network.

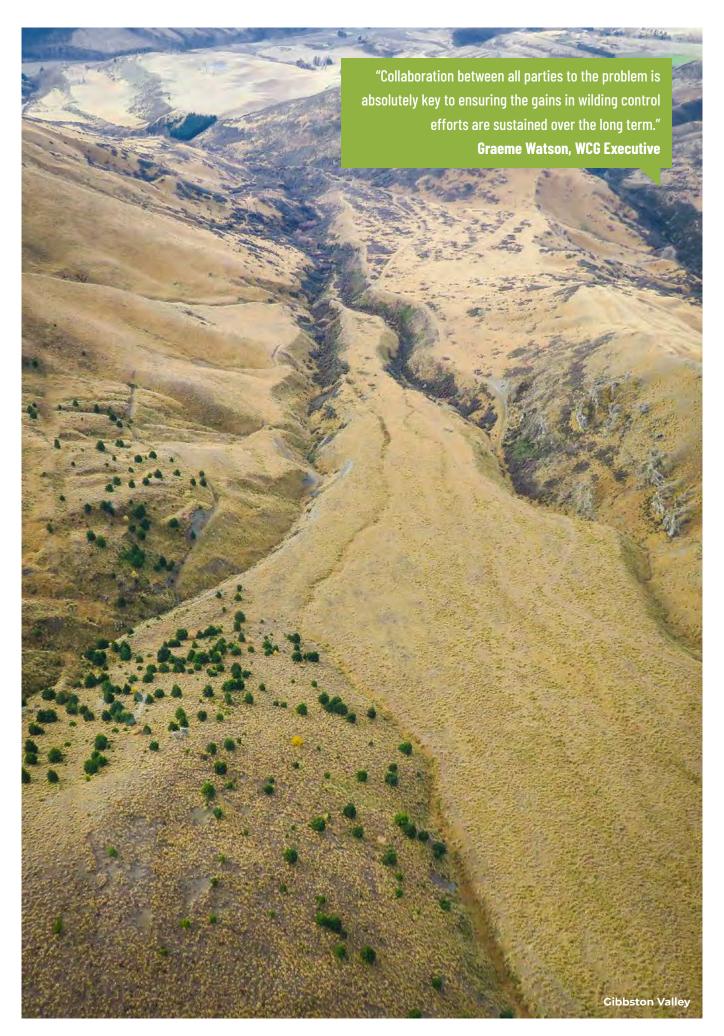
Supporters

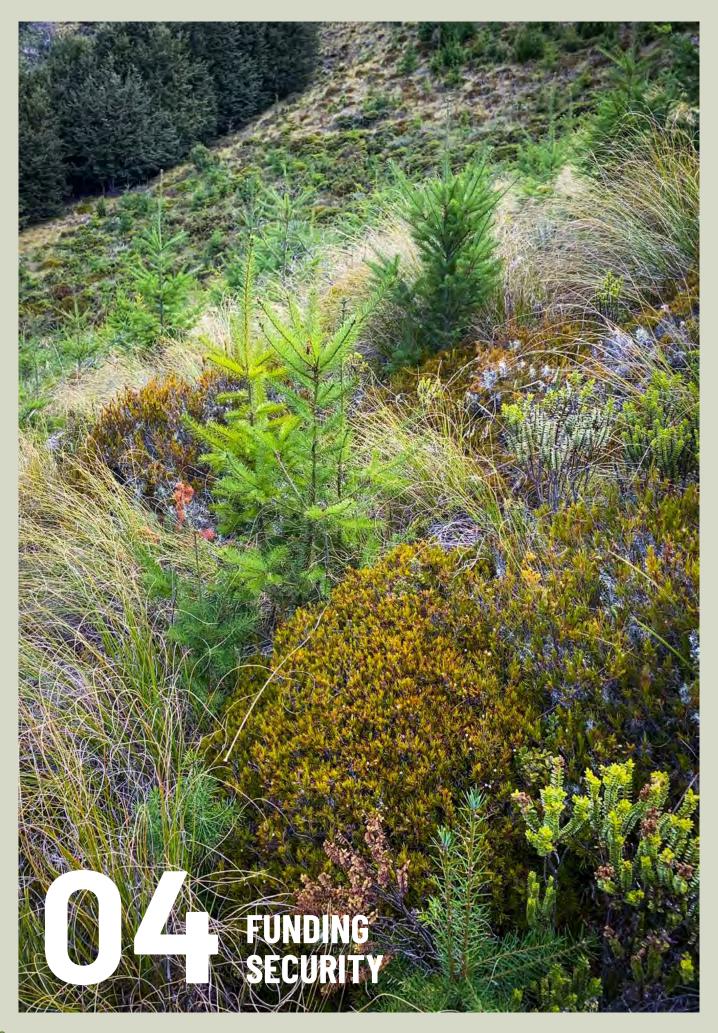
In addition, the WCG is appreciative of the support of Skyline Enterprises, the QEII National Trust, Todd and Walker Law, the ORC ECO Fund and other funders including the many landowners who willingly commit to contributions in the Whakatipu area.

KEY PRIORITIES

Key priority areas of focus for this strategy element include the following:

- Building high trust relationships
- Assisting with the planning of control work
- Being flexible regarding operational implementation
- Providing information and advice on preferred alternative planting varieties.





STRATEGY ELEMENT FOUR: FUNDING SECURITY

Sustained funding is the lifeblood of wilding control. The nature of the wilding problem is such that it cannot be addressed by one-off or even limited term year-by-year funding. Control treatment and retreatment for as long as necessary is vital to secure the gains and achieve control, otherwise funds will be wasted.

"Initial control treatment can be likened to capital expenditure, with retreatment similar to ongoing maintenance spending to maximise the investment made at the outset. Similarly, a "whole of life" approach to expenditure on an infestation takes into account the necessity for retreatment/s."

Dick Hubbard, WCG Trustee and Executive member

Funding wilding control is an investment

This was amply demonstrated in the 2018 Sapere cost-benefit analysis. In order to illustrate the long term consequences of surrendering land to wilding invasion, annualised impacts were examined over a 50 year period, then discounted to (then) present day values.

A 'Doing Nothing' scenario was calculated to have a catastrophic impact and that was reflected in the estimated \$5.3 billion net loss.

Of the other two scenarios examined, 'Treading Water' and 'Turning the Tide' were based on investments with respect to each of \$64 million and \$166 million. These were calculated to result in net benefits of \$2.6 billion and \$6.1 billion, with a massive cost-benefit ratio of 42:1 and 38:1 respectively.

The total quantified benefit of in excess of \$6 billion was assessed as resulting from impacts on productive land, water for irrigation and energy, biodiversity, fire safety, and household income and social benefits of employment.

The clear message of the Sapere study was that "a stitch in time saves nine" approach has large positive net benefits in the future, stating:

"If the objective is to reach a point where wilding conifers can be sustainably managed using a combination of private landowners and government support, it is better to act swiftly and decisively now." (Sapere study 2018)

Government allocations

In 2020 the Government provided \$100m nationally over four years for wilding control through a Jobs for Nature initiative, distributed through MPI-Biosecurity NZ. The 2020 funding was the most ever provided by Government for wilding control, and yet it fell well short of what is considered required to effectively deal with the problem. In addition, this funding was front loaded, with

the final year (2023-2024) of national funding set at \$10 million. This was earmarked for spending on "delivering high priority scheduled maintenance control to remove seedlings germinating in previously controlled areas" to maintain the gains rather than continuing with addressing initial control of seed sources and spreading infestations.

"In the face of an ever-growing pool of emerging weeds threatening unique native ecosystems, we cannot afford further delay in improving New Zealand's weed management system. Failure to take practical steps will simply mean that you are passing an ever-larger bill to future generations. We have seen how wilding conifers were able to take off and how expensive trying to keep them in check will be. I take no comfort from warning that weeds with the potential to cost just as much are right now taking the first steps towards widespread invasion."

Excerpt from a letter dated 28.2.23 from Parliamentary Commissioner for the Environment, Rt Hon Simon Upton to the Minister for Biosecurity - Hon Damien O'Connor and the Minister for Conservation - Hon Willow-Jean Prime.

"It's by far the most money we've ever received for wilding control. It was amazing, but still it's not enough. To remove all the wilding conifer invasions we know about would cost about \$400 million."

Former national wilding advisor Rowan Sprague quoted by Dave Hansford in NZ Geographic Issue

171 "The March of the Pines"

Expenditure in the Whakatipu area 2004-2023

Expenditure invested in the Whakatipu area totals in excess of \$26m since 2004 with substantial progress made in controlling wildings across the six National Programme Management Units. The amounts shown in the table below exclude privately-funded and volunteer control work which is both significant and gratefully acknowledged.

Total Investment in Wilding Control		Arrowtown Special Project
2004 - 2008	\$893,000.00	
2008 - 2013	\$1,900,000.00	
2013 / 2014	\$1,600,000.00	
2014 / 2015	\$1,300,000.00	
2015 / 2016	\$1,200,000.00	
2016 / 2017	\$1,400,000.00	
2017 / 2018	\$1,945,000.00	
2018 / 2019	\$1,900,000.00	
2019 / 2020	\$2,274,252.00	\$239,919.00
2020 / 2021	\$5,473,058.00	\$251,811.00
2021 / 2022	\$3,457,586.00	\$330,612.00
2022 / 2023	\$2,637,445.00	
TOTAL	\$25,980,341.00	

In addition to Government allocations through MPI - Biosecurity NZ, 2022-2023 funders of wilding control in the Whakatipu include QLDC (\$500k), DOC (\$240k), ORC (\$100k), Skyline Enterprises (\$50k), LINZ (\$40k) with various other donations, bequests, prizes and landowner contributions.

WCG funding manager role

The WCG Executive established a part-time Funding Manager role in February 2019 in recognition of the critical need for securing sustainable funding sources for wilding control operations through education and advocacy. The Funding Manager builds trusted relationships, connecting people, organisations, resources and opportunities to the work of the WCG and works closely with the operational team to manage discussions regarding landowner contributions.

While the QLDC continues to support necessary administrative and other functions associated with the WCG through the provision of staff time, gaps in management needs have been

taken up by the Funding Manager along with leading roles in social media and liaison with the growing local conservation network.

The Funding Manager works with QLDC and ORC councillors, and managers of all funding agencies to keep them informed and educated where necessary to maintain trusted and knowledgeable relationships. This includes extending invitations to events, sharing reports, attending key gatherings and making submissions.

The WCG Funding Manager's role extends across Strategy elements three and four.

Lobbying and advocacy

Key roles of the WCG are, in conjunction with the national Wilding Pine Network (WPN), lobbying and advocacy for wilding control, obtaining necessary funding, and pressing for a fit-for-purpose regulatory and enforcement environment. As part of these roles, the WCG takes opportunities to show key decision-makers the extent of the problem in the Whakatipu area, and what will inevitably occur if sustained funding falters.

KEY PRIORITIES

Key priority areas of focus for this strategy element include the following:

- Building and maintaining positive working relationships with funders, and supporting the introduction of inflation-adjusted contributions
- Providing assurance funds are being used wisely
- Developing the evidence base in support of funding bids
- Exploring additional funding opportunities, locally, nationally and internationally.

STRATEGY REVIEW

Three-yearly reviews of this Strategy are programmed which will enable the overall strategy to be updated, with the third review enabling a fresh strategy to be developed for adoption in 2034. Strategic priority locations will be reviewed and updated annually in time for them to be incorporated as far as possible in the upcoming operational plan.

2023	This Strategy adopted
2026	First review, Strategy updated
2029	Second review, Strategy updated
2032	Third review, fresh Strategy developed
2033	This Strategy due for renewal
2034	Next Strategy adopted

"The WCG's passion and commitment is to leave a legacy for future generations of an iconic landscape which is not smothered by exotic invasive conifers."

Peter Willsman, WCG Founding Chairman

REFERENCES

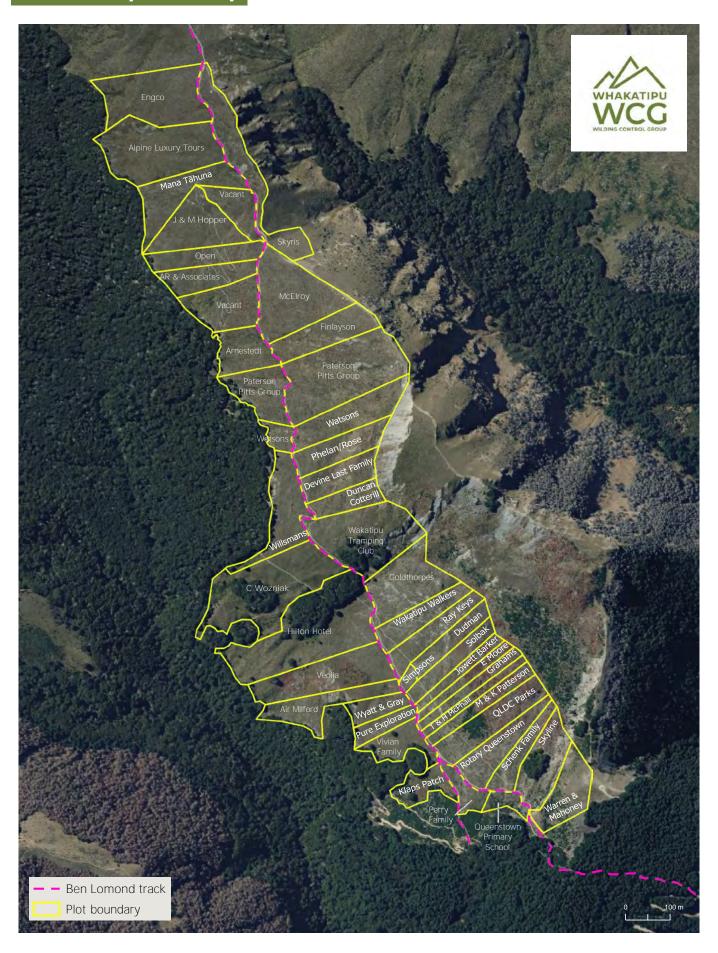
- 2013-2017 WCG Strategy, www.qldc.govt.nz
- NZ National Wilding Conifer Management Strategy 2015-2030, www.mpi.govt.nz
- WCG website: www.whakatipuwilding.co.nz
- WCG Facebook page: @WhakatipuWCG
- How to identify a wilding (MPI)
- How to control a wilding Volunteers (WCG)
- Wilding Pine Control Guidelines A guide to choosing the right control method (WPN)
- Otago Regional Pest Management Plan 2019-2029, www.orc.govt.nz
- Volunteer/Community Agreement between WCG and QLDC dated 7 September 2021

- Community Agreement between WCG and DOC dated 30 June 2021
- Sapere Research Cost Benefit Analysis Study (2018), www.srgexpert.com
- Wilding Pine Network, www.wildingpinenetwork.org.nz
- Parliamentary Commissioner for the Environment letter to the Minister for Biosecurity dated 28.2.23 regarding the National Wilding Conifer Control Programme and the letter in response from the Minister for Biosecurity dated 15.3.23, pce.parliament.nz/publications

GLOSSARY

DOC	Department of Conservation	ORC	Otago Regional Council
LINZ	Land Information New Zealand	PCL	Public Conservation Land
MBIE	Ministry for Business, Innovation	QLDC	Queenstown Lakes District Council
	and Employment	WCG	Whakatipu Wilding Control Group
MPI	Ministry for Primary Industries	WPN	Wilding Pine Network
ORPMP	Otago Regional Pest	WRT	Whakatipu Reforestation Trust
	Management Plan		

Annex 1: Adopt a Plot Map



Annex 2: WCG Strategy-at-a-glance

2023-2033 STRATEGY AT A GLANCE

WILDING CONIFER CONTROL

COMMUNITY ENGAGEMENT & SUPPORT

LANDOWNER, STAKEHOLDER & PARTNER SUPPORT

FUNDING SECURITY



2033 GOAL:
WILDINGS UNDER
CONTROL IN THE
WHAKATIPU





Strategy Element One: WILDING CONIFER CONTROL

- Targeting strategic priority locations using the 4S model
- Undertaking follow-up control as necessary
- Monitoring for emerging infestations and applying best control options
- Collaborating with others on control operations as opportunities arise

Strategy Element Two:

COMMUNITY ENGAGEMENT & SUPPORT

- Raising awareness and a sense of urgency
- Emphasising all contributions count: every wilding removed is a future cost saved
- Educating the community, and motivating to take action
- Building a passion for maintaining the environment, and being part of a growing conservation network

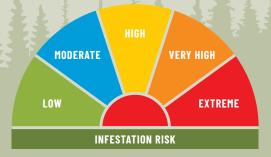
Strategy Element Three:

LANDOWNER, STAKEHOLDER & PARTNER SUPPORT

- Building high trust relationships with landowners
- Assisting with the planning of control work
- Being flexible regarding operational implementation
- Providing information and advice on preferred alternative planting varieties

Strategy Element Four: **FUNDING SECURITY**

- Maintaining high trust relationships with funders
- Providing assurance funds are being used to best effect
- Seeking inflation-adjusted funding contributions
- Pursuing additional funding sources, locally, nationally and internationally













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