Te Uru Rākau New Zealand Forest Service

Future of Forestry

A service of the Ministry for Primary Industries

New Zealand Government

Architect's drawing of the new Te Uru Rākau – New Zealand Forest Service operational headquarters to be built in Rotorua.

Hon Stuart Nash
Minister of Forestry

Minister's foreword

Becoming Minister of Forestry has been a long-held ambition realised for me. I have been involved in forestry for more than 20 years and I hold a Master's in Forestry Science, so I am thrilled to finally be able to put into motion the vision I have been building for the sector for a long time.

I am particularly pleased to take on the role at what is an exciting time for forestry and wood processing in New Zealand.

I believe the Government's focus on climate change represents a huge opportunity for the forestry sector. Forestry is, after all, one of this country's largest renewable resources.

Forestry will be key in our climate change response. We want more trees in the right places – whether they're for farmers diversifying their income or stabilising erosion-prone hills; foresters looking to increase the supply of wood for processing; or conservationists looking for more permanent indigenous forests to deliver biodiversity or recreation values. For Māori, I see huge potential across the whole forestry system, as landowners, community leaders, investors and guardians of the environment. The future of forestry needs to embrace and reflect the whole range of interests and values using native, exotic and mixed planting. It's important to recognise that trees not only sequester carbon but provide the raw material to replace carbon-intensive products currently used for fuels, heating, building and plastics.

We want to look at increasing our wood processing onshore, creating mills and wood processing plants in New Zealand, thereby creating jobs for New Zealanders and supporting rural communities even further.

It means using wood processing plants to create high-tech, high-value wood products and by-products to diversify the income streams of New Zealand's foresters. It means creating biofuels and biochemicals to support New Zealand's move away from fossil fuels and create a more sustainable future for all New Zealanders.

We have an opportunity to replace products, such as concrete, steel and petrol, with those made from wood grown and processed in New Zealand.

The future for forestry is also bright from an economic perspective. Importantly, the World Bank has projected that the global demand for wood fibre will quadruple by 2050.

I look forward to working with you as we embrace this exciting time for forestry and wood processing and ensure these sectors remain a key part in New Zealand's future growth and prosperity.

To represent the current challenges and opportunities, the name of the forestry business unit, which is part of the Ministry for Primary Industries, will change to Te Uru Rākau – New Zealand Forest Service.

This name encompasses and emphasises both the commitment the Government is making to the country's forestry and wood processing sectors and the high level of service, advice and management provided by Te Uru Rākau. I am committed to providing a higher level of advice and service to the forestry sector, landowners, iwi, councils and others, to help New Zealand take advantage of these exciting times for forestry.

Te Uru Rākau – New Zealand Forest Service

Responding to the threat of climate change is a major priority for New Zealand. The Government has declared a climate emergency, and the Climate Change Commission has already released a draft report that sets out a roadmap for change.

For forestry and wood processing, this represents an exciting opportunity for growth and transformation. The future of the forestry and wood processing sector lies in high-tech, high-value products being used to lower emissions and decarbonise the environment.

Forests are New Zealand's largest single renewable resource, and it is the role of Te Uru Rākau – New Zealand Forest Service to work with the forestry and wood processing sectors to maximise the economic and environmental potential of wood.

To achieve this, we want to have a diverse and productive forest estate. Permanently reforesting remote, unproductive and highly erodible land with native trees will provide a long-term carbon sink while improving biodiversity and water quality in the regions.

Better use of our production forests needs to be made as they will play an increasingly important role as a sustainable source of high-value, low-emissions material and bioenergy.

Wood grown in New Zealand will help provide biofuels, and native trees will act as carbon sinks offsetting emissions. Wood fibre-based products, such as bioplastics and biopharmaceuticals, present major opportunities to develop high-value exports that will contribute to New Zealand's future prosperity.

This vision is part of the Government's overarching Fit for a Better World – Accelerating Our Economic Potential roadmap to help ensure New Zealand rebuilds stronger and better, together.

The Roadmap focuses on three themes:

- **Productivity:** add $44 billion in export earnings over the next decade via a focus on creating value and building off the strong position of our core sectors.
- **Sustainability:** play our part in New Zealand's journey to a low emissions economy, by reducing biogenic methane to 24–47 percent below 2017 levels by 2050, including to 10 percent below 2017 levels by 2030, and by restoring New Zealand's freshwater to a healthy state within a generation.
- **Inclusiveness:** employ 10 percent more Kiwis from all walks of life in the primary sector by 2030 and 10,000 more New Zealanders in the primary sector workforce over the next four years.

By working with our partners and stakeholders across the forestry and wood processing sectors, we can unlock value and growth for the wider economy.

We will also deliver on our commitment and purpose of ensuring forestry delivers on the important role it plays in building a prosperous, environmentally sustainable future for New Zealand.

Transforming forestry and wood processing to grow and green the economy

Te Uru Rākau – New Zealand Forest Service is developing an Industry Transformation Plan to unlock the sector's potential.

The Forestry and Wood Processing Industry Transformation Plan (ITP) provides a pathway to unlock the potential of each sector to lift productivity across the supply chain, add more value to New Zealand export products, and scale up investment in areas where New Zealand has a comparative advantage. In doing this, we can increase the contribution to the economy through forestry and wood processing, create jobs across the regions, and accelerate the decarbonisation of the economy.

The ITP is being developed in partnership with Māori and stakeholders including industry and unions. The initial engagement phase has identified the key challenges and opportunities for the sector and the ITP is now entering the policy development stage. This will be supported by further targeted engagements with stakeholders over the coming months, and a draft of the ITP will be released for industry consultation in the second half of 2021.

Fit for a Better World initiatives

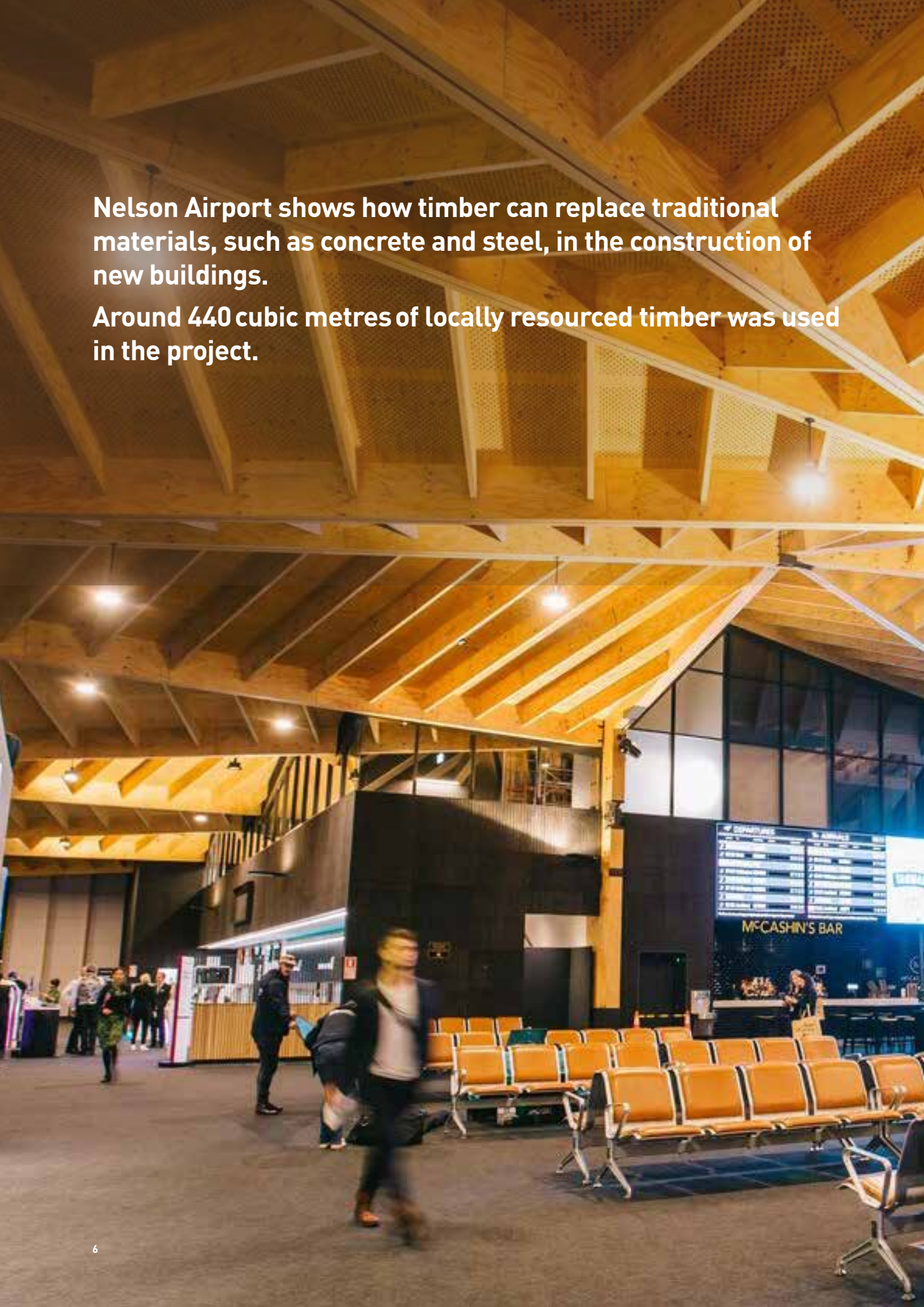
Three initiatives launched under the *Fit for a Better World* roadmap aim to kickstart the transformation of the sector ahead of the completion of the ITP.

The **Wood Fibre Futures Project** is investigating opportunities to produce bioproducts from wood residues, to reduce New Zealand's emissions and generate export revenue. The current stage is developing feasibility studies to attract investment in the production of liquid biofuels, solid biofuels and biocrude. These products all have significant potential to reduce New Zealand's emissions by replacing fossil fuels used by industry and the transport sector. Te Uru Rākau – New Zealand Forest Service is working with other government agencies on initiatives to accelerate the development of a wood fibre bioeconomy.

The **Manufacturing Clusters** initiative is investigating opportunities to co-locate synergistic wood processing plants and plants from other industries to achieve efficiency gains and minimise waste. Manufacturing clusters have the potential to improve productivity and competitiveness while reducing emissions by using processing residues as a feedstock for secondary processing, electricity and heat production.

The **Timber Design Centre** initiative will encourage greater use of timber in construction of all building projects by providing information to stakeholders to facilitate ease of use of timber across the entire design, planning, construction and project management phases.

The intention is to develop a world leading resource centre that positions New Zealand at the forefront of global expertise in mass timber construction design and implementation.



Nelson Airport shows how timber can replace traditional materials, such as concrete and steel, in the construction of new buildings.

Around 440 cubic metres of locally resourced timber was used in the project.


UPCOMING GAMES

Trees planted – Forest Estate

258,686,000 trees planted since the One Billion Trees programme commenced in 2018, to the end of 2020

95,400,000 seedlings estimated to have been planted in 2020

42,602,000 trees directly funded by the One Billion Trees programme

- **69%** native
- **31%** exotic (to end of 2020)

Emissions Trading Scheme – post-1989 forest land

108 approved applications in 2019/20 from new ETS participants

2,111 ETS forestry participants as at 26 January 2021

333,344ha

Total land registered in the ETS as at 22 February 2021

31,580ha

Crown's forest estate ha as at 31 July 2020

Forestry's economic potential

Forestry adds $6 to $7 billion to the economy each year in export revenue, and the Fit for a Better World roadmap highlights the potential to accelerate forestry's contribution to New Zealand's economy.

The key to maximising growth is adding value to what we produce. The Roadmap highlights the potential to increase export growth by unlocking an additional $2.6 billion in annual export revenue by 2030 from the forestry sector. A sector Industry Transformation Plan will chart a pathway to improving efficiency through co-location of complementary manufacturing sites.

Opportunities include increasing the production and use of wood-based construction material for both the domestic and export markets, and a focus on those materials where radiata pine can compete internationally, such as cross laminated timber (CLT), glue laminated products, clear wood for appearance grade fittings, treated timber, and wood insulation.

Other areas for development include generating woody biomass for downstream sectors, thereby reducing emissions from alternate materials and increasing stored carbon in the built environment, and the development of a bioeconomy based on better use of wood residues. We can also explore biocrude oil, a base product that can be made into a wide range of low carbon products including biofuel, bioplastics, biochemical and biomaterials.

Future growth could come from:

- Switching 40 percent of current log export volumes to higher value sawn timber, veneer, panel, and pulp product exports, and by developing Regional Manufacturing Clusters that create a more internationally competitive and economically resilient wood products industry.
- Converting woody residues to high-value products, such as solid and liquid fuels or wood-based insulation.
- Improving market access and trade negotiations to address non-tariff barriers and reduce trade-distorting measures in relation to wood products.

A forestry and wood processing advisory service to plan for the future

The Government is committed to providing the right support for forestry and wood processing, which is why we are boosting the national planning and advisory capability within Te Uru Rākau – New Zealand Forest Service.

Our planned fit-for-purpose operational headquarters in Rotorua shows our commitment to providing on-the-ground help to landowners, foresters, iwi/Māori, local government and organisations that wish to introduce trees into their landscape.

Over the coming months, Te Uru Rākau – New Zealand Forest Service will further enhance our advisory work to help people understand what trees to plant, where to plant them, how to navigate the Emission Trading Scheme, how to remediate erosion issues and, for farmers, how to make the most of riparian planting and on farm forestry.

The *Fit for a Better World* roadmap identifies the potential for forestry to accelerate economic growth, but that can only happen if people are getting the right advice and we work together to maximise opportunities in areas including greater domestic wood processing and biofuels.

Decisions we make today can affect the sector for decades to come so it's important we have a strong advisory presence in regional New Zealand, in places like Rotorua, to accelerate the long-term environmental and economic gains from forestry.

The new name, Te Uru Rākau – New Zealand Forest Service, reflects our pledge to provide more support for the sector alongside our wider work with key stakeholders to develop our industry transformation plans.


HITACHI

Forestry and wood processing workforce

Partnering with the forestry and wood processing sectors to grow the workforce

As the forestry and wood processing sectors look to the future, it is estimated they will need to employ another 5,000 highly skilled people by 2025, on top of the more than 35,000 people already employed.

To achieve this, Te Uru Rākau – New Zealand Forest Service is partnering with the sectors through the Forestry Workforce and Wood Processing Action Plan, so people have the necessary skills and expertise for the increasingly varied and highly skilled jobs that will be needed.

The action plan initiatives focus on ensuring employers have the knowledge needed to develop new initiatives to attract people to the sectors. This includes ensuring that we have the right types of training available to meet the future needs of the sector and employment practices to attract and retain diverse and skilled workers.

We want people to access training pathways that will provide them with the right training so they can have long, varied and successful careers in an industry that contributes to New Zealand economically and environmentally.

Emissions Trading Scheme – working with landowners to transform forestry planting

Forests are New Zealand's best renewable resource for combating climate change by removing greenhouse gases from the atmosphere.

The Emissions Trading Scheme (ETS) encourages the planting of new exotic and native forests to help meet New Zealand's emissions reduction targets by allowing people to claim carbon credits. New forests are one of the cheapest and most effective ways to reduce net emissions and deliver other economic, social, cultural and environmental benefits to New Zealand.

Since its establishment in 2008, participation in the Forestry ETS has grown to more than 2,100 participants, of whom 80 percent are smaller forest owners – including farm foresters – for whom forestry is not their main business. There are 333,344 hectares of land registered in the ETS, for which around 6.9 million carbon credits were claimed last year. This is equivalent to the carbon emissions from approximately 2.3 million cars in a year.

Most new forestry planting (89 percent) has occurred on land classes 6, 7 and 8, which is land that is not considered prime farmland.

It isn't a case of farming or forestry, we require both, and by planting land that might not otherwise be used with native trees, we not only help to meet climate change goals, we also improve the land and provide a place for native flora and fauna to thrive.

Supporting more tree planting

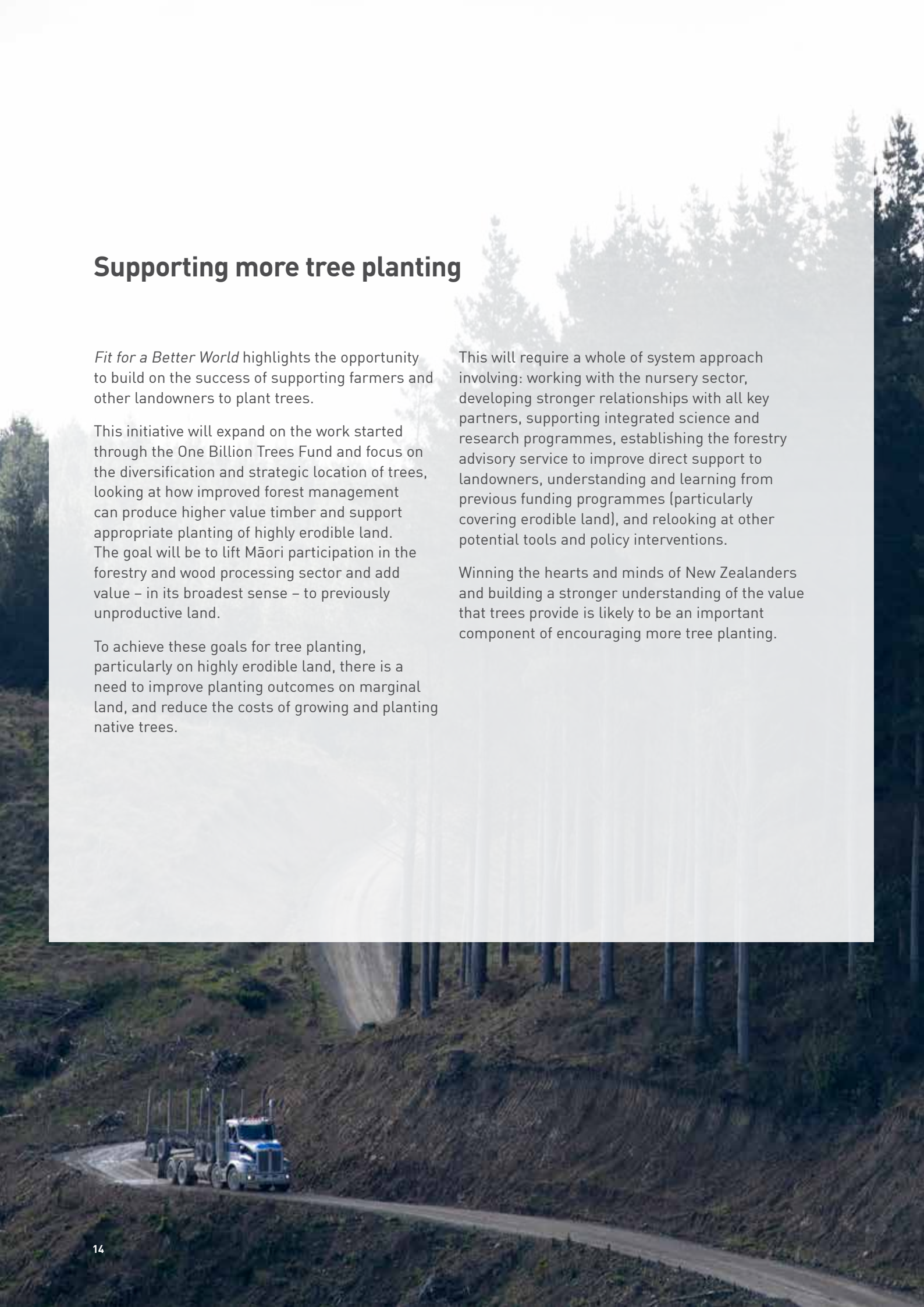
Fit for a Better World highlights the opportunity to build on the success of supporting farmers and other landowners to plant trees.

This initiative will expand on the work started through the One Billion Trees Fund and focus on the diversification and strategic location of trees, looking at how improved forest management can produce higher value timber and support appropriate planting of highly erodible land. The goal will be to lift Māori participation in the forestry and wood processing sector and add value – in its broadest sense – to previously unproductive land.

To achieve these goals for tree planting, particularly on highly erodible land, there is a need to improve planting outcomes on marginal land, and reduce the costs of growing and planting native trees.

This will require a whole of system approach involving: working with the nursery sector, developing stronger relationships with all key partners, supporting integrated science and research programmes, establishing the forestry advisory service to improve direct support to landowners, understanding and learning from previous funding programmes (particularly covering erodible land), and relooking at other potential tools and policy interventions.

Winning the hearts and minds of New Zealanders and building a stronger understanding of the value that trees provide is likely to be an important component of encouraging more tree planting.



Crown Forestry

Crown Forestry, as part of Te Uru Rākau – New Zealand Forest Service, manages the Crown's commercial forest assets to achieve the best return for the government while meeting the Crown's legal and contractual obligations. As a direct participant in the New Zealand forest industry, Crown Forestry operates on a commercial basis.

The 31,000 hectares of forest assets under management include:

- Crown Forest on leased Māori land;
- Crown Forest on Crown land;
- Crown Forest 1BT Joint Ventures.

In addition, Crown Forestry administers the Crown's interest in several afforestation leases (where forest owners have trees planted on Crown land).

As part of the One Billion Trees Programme, Crown Forestry has been entering into new commercial forestry joint ventures, to build the forestry sector, support the one billion tree target and contribute to Māori and regional development.

Forestry joint ventures are a common commercial practice, allowing a forest owner (in this case, the Crown) to grow a tree crop on a second party's land, with returns to both parties. They are particularly effective for land that faces barriers to development.

Since the programme was launched, Crown Forestry has contracted 39 forestry joint ventures totalling 21,849 hectares (91 percent of the target area). Sixteen joint ventures are with Māori landowners and account for around 12,256 hectares (56 percent) of the total contracted area.

The Crown Forestry team is located in Wellington and Rotorua. Operational staff are also located in Northland and the Wairarapa. Core activities include the overall responsibility for operational and strategic planning, divestment and investment negotiations, monitoring, audit and reporting.

Case study 1

Crafting beautiful buildings from engineered timber

Mid-Rise Wood Construction is a partnership programme between the Ministry for Primary Industries (MPI) and Red Stag Investments Ltd.

The 4-year, $5 million programme kicked off in 2018 with its sights on encouraging widespread adoption of precision-engineered timber in mid-rise building construction in New Zealand.

Aside from its natural beauty, engineered timber provides a very strong, low carbon and comparably low-cost alternative to steel and concrete. It's easier to transport, relatively light, and has outstanding earthquake and fire resilience. The use of prefabrication can speed up construction by as much as 30 percent, and reduce costs. Combining cross-laminated timber (CLT), glulam and panelised framing timber is a cost-effective, fast, resilient, and sustainable system for mid-rise construction.

The programme is assembling a pool of New Zealand professionals experienced in mid-rise wood building design and construction to help share and grow knowledge and expertise within the broader industry.

Construction of a 5-storey, 10 apartment demonstration building, which had been delayed by COVID-19, has begun at the Clearwater Resort in Christchurch. It will showcase engineered timber construction, act as a reference site, and inform case studies. A second building is in development. The aim is to demonstrate the advantages of design and construction in mass-timber to developers. Construction costs associated with the programme are being covered by Red Stag, and MPI investment is contributing to other aspects of the programme, such as design, and collating and sharing information.

The Mid-Rise Wood Construction Programme aims to substantially increase demand for engineered wood products in buildings. This will have associated flow-on benefits across the entire supply chain, including developing domestic manufacturing capacity. This will create new regional jobs and renewed investment in forestry, processing, manufacturing, construction, and prefabrication. Achieving the programme's goals will significantly advance New Zealand's engineered timber industry and boost sustainability.

Case study 2

How tōtara can drive value and growth in Northland and New Zealand

One Northland-based initiative looking at the feasibility of sustainably growing and harvesting tōtara for commercial use could potentially unlock significant future economic and environmental gains for the region and New Zealand.

The Tōtara Industry Pilot is a partnership between Te Uru Rākau – New Zealand Forest Service, Scion, Taitokerau Māori Forests Inc and Tane's Tree Trust, along with other government agencies and private landowners. This collaboration was launched in 2018 to test how sustainable regeneration and cultivation of tōtara can deliver commercial opportunities for local industries, businesses and communities, including Māori.

Phase one of the initiative was completed in 2020 and showed there is enough tōtara on private and Māori-owned land in Northland to develop a strong productive economy, worth an estimated $30 million a year to the local and national economies.

Tōtara grows quickly in Northland, compared with other wood species, due to the region's climate. Tōtara has been an under-used resource and many trees in the region have matured to where they can be harvested.

Manufactured tōtara products can include wall and ceiling linings, carved gifts, household items and souvenirs. These can also be made in Northland, using wood processed and kiln dried cost-effectively at existing commercial sawmills and factories.

There is growing interest from landowners in diversifying their land for using tōtara, which can be harvested and milled under the Forests Act. As part of its regulatory responsibility, Te Uru Rākau is providing guidance on developing Sustainable Forest Management plans, and compliance with the Act, so the resource is sustainably managed.

The potential for Northland and New Zealand includes creating jobs, new businesses and increasing environmental sustainability through encouraging the regeneration and planting of native forest.

In the future the project will be led by Māori and work with landowners, wood processors, iwi and manufacturers to develop commercialisation plans, identify new markets and ensure the outcomes deliver long-term benefits to the local communities.

Initiatives such as the Tōtara Industry Pilot support future opportunities and provide value for local communities and demonstrate the role of forestry in achieving these outcomes. Te Uru Rākau – New Zealand Forest Service is proud to be part of the project as another way of ensuring forestry plays a key role in delivering economic and environmental growth for New Zealand.

For more information, go to:
https://www.totaraindustry.co.nz

Case study 3

Tackling hill country erosion through rural partnerships

Protecting New Zealand's hill country from erosion, and the impacts on communities and the environment, is the focus of the Hill Country Erosion Programme (HCEP) – a partnership between Te Uru Rākau – New Zealand Forest Service, regional councils, and farmers.

MPI's Hill Country Erosion Programme is contributing $34 million to projects for the 2019-2023 period.

Planting trees and retiring vulnerable hill country land from production provides a long-term solution to erosion control. In turn, it helps retain overall land productivity and reduce sediment entering waterways.

Erosion and its effects in hill country areas – lost soil, nutrients, and production; damage to trees, houses, infrastructure, and waterways – are estimated to cost New Zealand's economy $100 million a year. Not only is this a significant financial cost to our local communities and economy, there are also serious impacts on the environment.

Since 2007, the Hill Country Erosion Programme has provided funding to Northland, Waikato, Gisborne, Hawkes Bay, Taranaki, Horizons, Greater Wellington, Tasman, Nelson, Marlborough, Canterbury, and Southland. Snapshots of funded work include:

- Building constructive working relationships between council staff and farmers to achieve sustainable land management outcomes, such as fencing off erosion-prone land on a Porirua farm, protecting wetland and assisting with livestock management.
- Engaging with lifestyle block owners to develop land environment plans and plant 35,000 trees on erosion-prone land, improving water quality and biodiversity across 26 properties.
- Land management advice to a farmer struggling to manage a huge landslip in Taihape, which eventually led to a successful One Billion Trees funding application to plant 100,000 Mānuka trees to remediate the slip and prevent further erosion.
- Council engagement with community groups including in the Waikato's Lower Mokau, Mangaotaki and Awakino catchments where work occurred across 232 properties to control erosion by fencing off unproductive land for planting and stream protection.
- Support for the Whangawehi Catchment Management Group on the Mahia Peninsula to work together and establish 200,000 native trees and new fencing across the catchment, improving water quality in the river, the estuary and mahinga kai beds.

For more information, go to: **https://www.mpi.govt.nz/forestry/funding-tree-planting-research/hill-country-erosion-programme/**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