

# Forestry Activity Management Plan 2021 – 2031

## Mahere Ngahere 2021 – 2031



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## Quality Assurance Statement

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Pictures on front sheet: Roding Forest

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## EXECUTIVE SUMMARY

### i. The Purpose of the Plan

The Forestry Activity Management Plan (Plan) outlines the current and future operational requirements needed to meet Council's needs, in the most cost-effective manner.

This plan focuses on ensuring forestry assets are maintained to provide the desired level of service, and to meet the current and future community outcomes in a sustainable manner.

**The Goal of the Forestry Activity in relation to its production forests are to manage its forest estate on a sustainable basis and to maximise not present value and to implement best practice forest industry standards while protecting environmental and recreational values.**

The overall objective of Activity Management is to:

**Meet a required level of service, in the most cost-effective manner, through the management of assets for present and future customers.**

This plan will provide the substantiation for budget forecasts put forward in the Long Term Plan (2021-2031).

### ii. Philosophy

Management of the commercial forest land is driven by the recommendations of the 2016 review report which retains the majority of productive commercial forests and retires approximately 25% of commercial forests for alternate use. These alternate uses include manuka, amenity/long-rotation species, managed native regeneration, and replanting in native species.

**Production Forest:** The harvesting contractor is responsible for preparing a 10-year harvesting plan to maintain and harvest the remaining production forestry blocks.

**Environmental Issues:** 'Best Practice' forestry techniques will help manage sedimentary controls to prevent discharge to waterways and are driven by the National Environmental Standards (NES).

Council's commercial forestry is guided by Council's Treasury and Investment Policy.

### iii. Levels of Service

**Table E-1: Forestry Levels of Service**

				<b>Performance Targets</b>			
<b>Community Outcomes</b>	<b>Level of Service</b>	<b>Performance Measurement</b>	<b>Previous and Current Performance</b>	<b>21/22 (Year 1)</b>	<b>22/23 (Year 2)</b>	<b>23/24 (Year 3)</b>	<b>24-28 (Years 4 to 10)</b>
Our unique natural environment is healthy and protected	Maintained to good standard	Achieve Forest Stewardship Standard	Previous and current	Accreditation achieved	Maintained	Maintained	Maintained
	Achieve NES standards	No breaches	New	No breaches	No breaches	No breaches	No breaches
Our infrastructure is efficient, cost effective and meets current and future needs	Financial returns	Costs and income meet NCC budget targets. Target allows for market price fluctuations.	Previous and current	Maximise Council Treasury and Investment Policy	Maximise Council Treasury and Investment Policy	Maximise Council Treasury and Investment Policy	Maximise Council Treasury and Investment Policy

### iv. Financial Summary

**Table E-2 – Forestry Account – Historical Income and Expenditure**

Historical Income and Expenditure	2016/17	2017/18	2018/19	2019/20
Operating Income	(3,248,593)	(6,180,566)	(2,348,479)	(1,037,618)
Operating Expenditure	1,915,403	4,081,049	1,947,700	950,324
<b>Cash (Surplus) / Deficit</b>	<b>(1,333,190)</b>	<b>(2,099,517)</b>	<b>(400,779)</b>	<b>(87,294)</b>
Revaluation (Increase) / Decrease	(93,324)	1,473,060	(166,736)	(2,495,000)
<b>Net (Surplus) / Deficit</b>	<b>(1,426,514)</b>	<b>(626,457)</b>	<b>(567,515)</b>	<b>(2,582,294)</b>

Forestry Asset Value (excl. Bell Island)	2016/17	2017/18	2018/19	2019/20
Opening Balance	5,691,000	5,784,324	4,311,264	4,478,000
Plus Revaluation Increase / (Decrease)	93,324	(1,473,060)	166,736	2,495,000
<b>Closing Balance</b>	<b>5,784,324</b>	<b>4,311,264</b>	<b>4,478,000</b>	<b>6,973,000</b>

Forestry (Loan) / Reserve	2016/17	2017/18	2018/19	2019/20
Opening Balance	(2,182,485)	(849,295)	1,250,221	1,651,000
Plus Cash Surplus / (Deficit)	1,333,190	2,099,517	400,779	87,294
<b>Closing Balance</b>	<b>(849,295)</b>	<b>1,250,221</b>	<b>1,651,000</b>	<b>1,738,294</b>

**v. Forestry Sub-Committee**

Forestry is administered by the Forestry Sub-Committee. The sub-committee membership, as confirmed in the Terms of Reference, is as follows:

Chair	<ul style="list-style-type: none"><li>• External appointee</li></ul>	Decision-maker (Voting rights)
Members	<ul style="list-style-type: none"><li>• Mayor</li><li>• Chair of Community and Receptions Committee</li><li>• Chair of Environment and Climate Committee</li></ul>	Decision-maker (Voting rights)
Officers	<ul style="list-style-type: none"><li>• Officer with responsibility for forestry</li><li>• One other officer</li></ul>	To provide advice (No voting rights)
Independent Forestry Expert	<ul style="list-style-type: none"><li>• External appointee</li></ul>	To provide advice (No voting rights)

Refer to Appendix for complete terms of reference.

# 1. INTRODUCTION

## 1.1 Background

Council's interest in forestry extends back to the 1940s, with additional forestry land being purchased in the 1980s and '90s to achieve a more viable scale.

Records note various reasons for purchasing forestry property: maintaining walkways; looking after areas of cultural significance; retaining a suitable catchment area for water treatment; managing environmental issues such as erosion/land stability; providing a scenic backdrop to the City; supporting future City growth; investment reasons; economic development and employment opportunities brought about by the forestry industry; connecting with and development of reserves and facilities such as Marsden Cemetery.

The Nelson–Tasman region produces good quality timber trees with high growth rates, and high-density timber. Such timber has a higher number of end uses and potential markets than lower quality, lower density timber.

It is however, acknowledged that the forest estate has value beyond just commercial forestry operations. Forests are attracting increasing environmental interest as well as a growing recreational use.

The forest land covered within this Plan covers the commercial forestry holdings of Nelson City Council and does not refer to the management of the large areas of land with natural forest cover such as the Brook Waimarama Sanctuary, the Grampians, or any other Parks forestry and reserves assets.

Following an independent review of the Council's plantation forests in 2016 by the Catalyst Group (refer A1591849), Council adopted a strategy:

- a. That a single species (*pinus radiata*) will be used for replanting commercial stands; and
- b. That will result in approximately 25% of the forest area being retired from timber production and re-established in permanent forest cover consisting mainly of native forest species.

The plan detailing the alternate species is covered in a report prepared by Landvision Ltd – Nelson City Council Forestry Alternative Management (refer to A1989331).

Table E-4 shows the future land use of the forest area (some area has already been retired since 2016). This will see the retirement of approximately 29.9 hectares of Douglas Fir in the Brook / Maitai and Marsden blocks.



**Table E-3: Forestry Future Use Categories**

<b>Land use</b>	<b>Stocked area (hectares)</b>
Permanent forest cover (non-timber production)	174.1
Timber production	518.6
Amenity planting (exotic species)	1.4
<b>Grand Total</b>	<b>694.1</b>

A Forestry Sub-Committee, comprising councillors, officers, and a specialist forestry expert, approves forestry and harvesting management strategy and plans, engages contractors, approves budgets, and decides any other matters relating to commercial forestry operations. Operational management is carried out by a contracted forest manager.

### **1.1.1 Organisation, Vision, Mission**

#### **Vision**

Nelson is the Smart Little City.

#### **Mission statement**

We leverage our resources to shape an exceptional place to live, work and play.

#### **Community outcomes**

Councils are required by the Local Government Act 2002 to have Community Outcomes – a statement of the measures of success that Council is working to achieve for the community. Council has eight current community outcomes that are summarised below:

- Our unique natural environment is healthy and protected
- Our urban and rural environments are people-friendly, well planned and sustainably managed
- Our infrastructure is efficient, cost effective and meets current and future needs
- Our region is supported by an innovative and sustainable economy
- Our communities are healthy, safe, inclusive, and resilient
- Our communities have opportunities to celebrate and explore their heritage, identity, and creativity
- Our communities have access to a range of social, educational, and recreational facilities and activities

- Our Council provides leadership and fosters partnerships, a regional perspective, and community engagement

## **1.2 Asset Management Practices**

### **Information systems**

All asset information is stored on ArcInfo (a computer based geographical information system).

### **Accounting and Financial Systems**

The Nelson City Council uses integrated computer software supplied by MagiQ.

### **Geographical Information System**

Data captured will be recorded to an accuracy as allowed for by current technology.

## **1.3 Monitoring and Improvement Programme**

This Plan is regularly revised and is an evolving document and will be reviewed annually and updated at least every three years to coincide with the Annual and Long Term Plans and to incorporate decision making, updated asset information, and Nelson City Council policy changes that may impact on the levels of service.

The Plan will be improved throughout its life cycle as further information about the forestry assets are collected. Nelson City Council is committed to advanced data collection and management systems that will allow for a greater appreciation of the assets.

Nelson City Council will report variations in the adopted annual plan budgets against the original asset management plan forecasts and explain the level of service implications of budget variations.

The effectiveness of the Plan will be monitored by the following procedures:

- Financial expenditure projections prior to year end
- Resource consent monitoring as required by consents
- Operations and Maintenance reports to the Forestry Advisory Group

## **1.4 Carbon Forestry**

Council approved the suite of recommendations listed below with respect to the Emission Trading Scheme (ETS) and all these items have been actioned.

1. Deregister the post-1989 forest from the ETS.
2. Assess the area of pre-1990 forest land that may be cleared for expansion of the York Valley landfill and retain sufficient NZUs from the

pre-1990 forestry allocation to meet any obligations to surrender NZUs in relation to deforestation.

3. Delay clearing of pre-1990 forest land for landfill expansion until the stands are at least eight years old in order to minimise ETS liabilities.
4. Sell Council's surplus pre-1990 carbon credits on the open market, or to Council's landfill account.

### **Emissions Trading Scheme (ETS)**

The ETS is a compliance scheme administered under the Climate Change Response Act 2002 that enables New Zealand to meet its international climate change obligations by placing a cost on carbon emissions. It requires persons who are responsible for carbon emissions to transfer New Zealand Units (NZUs) to the Government to cover these emissions. It also provides for persons to voluntarily register for certain activities that remove carbon from the atmosphere, and for the Government to transfer NZUs to these persons. NZUs were priced at \$34 in September 2020.

Forest land is classified under the ETS as either pre-1990 (generally land that was forested in 31/12/1989) and post-1989 (generally land that became forest after 31/12/1989). The Council's forest land has land in these classes as follows:

<b>ETS Class</b>	<b>Area (hectares)</b>
Pre-1990 exotic	600
Post-1989 native	39
Post-1989 exotic	94

The Council also owns around 10,000 hectares of pre-1990 native forest which is out of the scope of the ETS.

The pre-1990 exotic forest was eligible for a one-off allocation of NZUs from the Government. 33,360 NZUs were received in 2012 and used to partially offset the Council's ETS obligation to transfer around 16,000 NZUs annually to the Government to cover its annual landfill emissions.

The Council registered its eligible post-1989 exotic forest in the ETS in 2012 and was issued 24,186 NZUs. In 2016 various options were considered for managing this forest area in the ETS, and a decision was made to deregister. Staying in the ETS would mean that nearly all the NZUs issued would have to be surrendered as the forest is harvested. This is because the post-1989 forest was planted over a compressed timeframe (84% was planted between 1994 and 1997). Alternative forest management options are fraught with difficulty, so the least risk option for the Council was to deregister.

### **Voluntary market**

Voluntary carbon markets are ones where participation is entirely voluntary. For example, a firm may wish to be carbon neutral and achieves this by reducing the emissions in its value chain, and by buying emission reductions (offsets) from other parties such as forest owners. The certification and verification requirements however are quite stringent. For example, to be considered credible, an offset must be measurable and verified, additional, not double

counted, and leakage and permanence must be addressed. The Council is unlikely to have any significant area that would meet these requirements.

### **Looking forward**

#### **Average accounting:**

The ETS now provides for average accounting where NZUs are issued to a post-1989 forest until it reaches its long-term average carbon storage – about mid-rotation for an exotic forest that will be regularly harvested and replanted. However, the Council's post-1989 exotic forests have already grown past their long-term average, so there is no opportunity to earn NZUs. The only way to earn NZUs under averaging would be to extend rotation length significantly (not desirable), or to replant a different tree species with significantly more carbon storage (not much scope for this).

#### **Conversion to native forest:**

This option involves re-establishing more of the exotic forest in permanent not-for-harvest native trees, after harvesting, noting that around 25% of the exotic forest is already intended to be converted. The post-1989 component could earn a stream of NZUs for a very long time.

It would result in environmental benefits, less sediment movement into waterways, less impact on landscape character, improved biodiversity, contribution to ecological corridors, less risk to urban water supply, better recreational opportunities, and protection of archaeological sites.

However, there are downside issues and risks:

- The transition to native forest would be achieved by a mix of replanting and natural regeneration of native forest trees. However, this is expensive particularly on warmer, sheltered sites where weed invasion requires repeated control work. The Council has gained some experience of the costs and practicalities of re-establishing native forest in the areas it has already decided to transition to native forest.
- There is a risk of establishment failure that would trigger a deforestation liability under the ETS in the order of \$20,000 per hectare.
- A cashflow analysis for post-1989 forest transition to native forest after harvest results in a negative net present value. This is due to the income stream from selling NZUs from the 94 hectares of post-1989 forest land being low relative to the high initial re-establishment costs. Also, there would be no net carbon growth until around 10 years after re-establishment because the decay of post-harvest roots and stumps from the previous forest has to be included in the calculation.
- Conversion would result in a loss of NCC net revenue, loss of regional jobs, reduced log supply to local timber industry, loss of value from sunk cost of existing infrastructure. On balance, this option has been discarded.

#### **Register post-1989 native forest in the ETS:**

In 2020, a desk-top GIS exercise showed there are around 39 hectares of potentially eligible naturally regenerated post-1989 native forest land in the Bolwell and Grampian Reserves, and the Marsden Valley. These could be registered as post-1989 forest land in the ETS and would generate a stream of

NZU income for the Council. Further investigation is required to determine feasibility.

## **1.5 Treasury and Investment Policy**

Council's commercial forestry is governed by its Treasury and Investment Policy. The relevant extract is as overleaf:

### **10.0 Forestry**

#### *10.1. Background*

*The Council has invested in and been involved in managing forestry interests since the 1940s and these are held as long term investments. Council-owned forests are located in the Brook, Marsden, Maitai and Roding. The total net stocked area as at 30 June 2019 is estimated at 579.3 hectares.*

#### *10.2. Policy*

*The Council's current policy for commercial forestry is:*

- To not purchase land for forestry purposes nor plant more commercial forests other than replanting;*
- Endorse and observe the provisions of the New Zealand Forest Accord (August 1991);*
- Comply with the National Environmental Standard on Plantation Forestry*
- Contract out forestry management to an independent Forest manager;*
- To manage its forest estate on a sustainable basis and to maximise net present value.*
- To fulfil its obligations under the NZ Emissions Trading Scheme (as set out in the Liability Management Policy).*

#### *10.3. Rationale*

*In the last few years the forestry and land management environment has changed considerably with a much greater emphasis on sustainability and the ongoing development of the Emissions Trading Scheme. Council reviewed the forestry strategy in 2016 and resolved to retain productive commercial forests that can be managed sustainably and retire some 140ha of forests and consider alternate use. The negative impacts of climate change and the likelihood of more extreme weather events is also a consideration for the future.*

#### *10.4. Benefits*

*The Council's forests are a significant resource, a means of generating revenue from public reserve land and provide for recreational use.*

#### *10.5. Financial Benefits*

*As well as revenue generation, there are also environmental and social benefits in that forests provide areas with public access for walking, biking, hunting and other recreation. Forestry operations contribute to local business operations including contract forestry management, logging*

*contractors, silvicultural contractors, transport contractors and Port Nelson.*

#### *10.6. Risks*

*Log prices are determined by market conditions and can therefore lose value if the market price falls. However forestry is still expected to be a low risk investment in the medium to long-term.*

#### *10.7. Financial Risks*

*Any forest is at risk from natural disasters, fire, and disease. Prices fluctuate and at any given time depend on world markets, particularly those in Asia. As development is funded from retained earnings within the closed account, any shortfall in earnings requires the Council to make additional external borrowings to fund development.*

#### *10.8. Environmental Risk*

*Poor management of logging operations could pose environmental risks, especially to water supply.*

#### *10.9. How the Investment is managed*

*The Council actively manages its investment in forestry by:*

- Contracting out forest management to reputable consultants;*
- Carrying out silviculture to a defined forestry management plan, which is reviewed every three years;*
- Revaluing forestry assets at 30 June each year*
- Minimising the impact of short-term decline in prices by delaying harvesting as appropriate;*
- Maintaining insurance cover for fire and wind damage.*

## **1.6 Forestry Stewardship Accreditation**

FSC accreditation is about applying good commercial forestry management practices to:

- a. Set a leadership example as a forest owner;
- b. To obtain best access opportunities to the local processing market.

The foundation of any FSC certification scheme is based on environmentally appropriate, socially beneficial, and economically viable forest management practices. Council is seeking accreditation in 2020/21.

The FSC renews each year following annual audits carried out on PF Olsen's various FSC client's forests.

## **1.7 Climate Change and Greenhouse Gas Emissions**

Climate change and a reduction in greenhouse gas emissions has been identified as an over-arching issue and a priority for Council. On 16 May 2019 Council declared a climate emergency accepting that it has a key role to understanding its emissions and, through Council's Certified Emissions Measurement and Reduction Scheme (CEMARS- Toitū Envirocare) Action Plan, create a resilient and

low emissions future. Central government has also introduced the Climate Change Response (Zero Carbon) Amendment Act in 2019 that sets greenhouse gas emission targets at zero by 2050. Council at its meeting of 13 August 2020 resolved to adopt these targets for Council's own greenhouse gas emissions reductions.

This AMP will look at better understanding its forestry activity greenhouse gas emissions with respect to its carbon footprint.

## **1.8 Future Works**

Council at its 24 June 2021 meeting resolved that work be undertaken to ascertain the costs of an independent review of Council's approach to forestry in 2021/22 (including potential costs, scope, and high-level financial implications), considering developing a regenerative forestry plan prioritising indigenous forest opportunities, climate leadership and innovation to inform the Forestry Activity Management Plan and Treasury Management Policy. This work will be scheduled, taking into consideration council priorities and staff workload, to inform the next 2024-34 Activity Management Plan.

Council at its 17 November 2021 meeting resolved to undertake a detailed assessment of all Council land under ownership and management for eligibility in the Emissions Trading Scheme (ETS) and that eligible Council owned and managed land (including exotic forestry) be registered into the Emissions Trading Scheme before 1 April 2022.

## 2. LEVELS OF SERVICE (WHAT WE PROVIDE)

Activity Management Plans set out the level of service Council seeks to provide the community for the respective activity.

Levels of service statements describe the outputs Council plans to deliver to the community. They are the measurable effect or result of a Council service, described in terms of quality, quantity, reliability, timelines, cost, or similar variables.

This section documents the levels of service for the forestry activity, the current performance and the performance measures and targets by which achievement of these will be assessed.

This section also contains information on customer research undertaken, strategic and corporate goals and the legislative requirements adhered to in arriving at the levels of service.

Changes to the levels of service may significantly change funding requirements in some instances.

Performance measures that are included in the Long Term Plan are reported on annually, through the Annual Report.

Council uses the Significance and Engagement Policy to determine the level of engagement required for a particular issue e.g. levels of service change.

### 2.1 Customer Research and Expectations

The Long Term Plan and Annual Plan consultation process includes Forestry. The extent of the historical and additional proposed consultation is detailed below.

**Table 2-1:**

<b>Consultation Processes</b>	<b>Date Frequency</b>
Long Term Plan process	Every 3 years
Annual Plan process	Each year that changes to the Long Term Plan are proposed

#### **Customer research undertaken and proposed approach to future consultation**

An independent review in 2016 highlighted how Council's involvement in forestry intersects with many of Council's other activities, both regulatory and non-regulatory. It set out proposed responses to a range of factors including: proximity of residential development; the increase in mountain biking and



impact of harvesting on tracks; possible Nelson Plan requirements; and the conflict between Council's investment in removal of wilding pines with its own Douglas Fir stands.

The review made recommendations (adopted by Council) to address these and other issues it identified. The goal over the period of this Plan is to implement these recommendations.

Local residents and recreational user groups will be advised before harvesting operations begin in any of the Council's production forestry areas.

## **2.2 Legislative Requirements**

The legislative requirements form the minimum level of service Council is required to comply. The forestry activity is influenced by the following legislative requirements:

### **Health and Safety at Work Act 2015**

Council must ensure the safety of the public and all workers (including contractors) when carrying out works.

### **The Local Government Act 2002**

Defines the purpose of local authorities as enabling local decision-making by and on behalf of the community and allows local authorities the power of general competence. The Nelson City Council is a local authority established under the Local Government Act 2002 (the Act) with purpose and responsibilities set out in the Act, in particular: 10(1)(b), 10(2) and 14(1)(h).

### **Resource Management Act 1991**

The Nelson Resource Management Plan (NRMP) and Nelson Air Quality Plan (NAQP) are regulatory documents that cover both district and regional activities. Council seeks to operate the current network in compliance with these Plans and seeks resource consents where permitted standards cannot be met. To that end Council holds a range of resource consents for both global and site-specific activities.

The forests lie within the Nelson City Council boundaries and jurisdiction. The NRMP is a combined District (land use) and Regional (coastal, land disturbance and freshwater) Plan. The NAQP controls activities in relation to air quality, including discharges such as spraying herbicide. The Council has embarked on a process of reviewing these Plans through the Nelson Plan project. Alongside these Plans the National Environmental Standard for Plantation Forestry, which came into effect in May 2018, regulates the environmental management of forestry.

The NCC forests are identified in the NRMP as being in the 'Rural' zone. Within this zone many of the plantation forestry activities are permitted activities in the NRMP and no resource consent is required. Weed spraying under both The NAQP

and the NRMP may be a permitted activity subject to adherence to Appendix AQ7 of the Nelson Air Quality Plan.

In practical terms the current rules allow tending, harvesting, and subsequent replanting of the NCC forest resource including the maintenance of tracks, roads, fire breaks, landings, and fence lines without a resource consent being required if certain conditions are met. Significant work such as earthworks, tracking or the installation of bridges may require resource consent.

### **Forestry Empowering Act 1978**

This Act provides Nelson City Council with the power (subject to other relevant legislation) to:

- acquire land for and to carry on the business of forestry
- carry on related industries
- allow the preparation of management plans for the forestry areas
- grant leases and licences and make bylaws.

An NES prevails over district or regional plan rules except where the NES-PF specifically allows more stringent plan rules. The NES-PF applies to any forest of at least one hectare that has been planted specifically for commercial purposes and will be harvested.

### **Climate Change Response Act 2002**

Part of the Council's exotic forest land is pre-1990 forest land as defined under this Act. There are potential obligations attached to this land, that is, a requirement to surrender New Zealand Units under the Emissions Trading Scheme if any of the land is deforested.

### **National Policy Statement for Freshwater Management 2020 (NPS-FM 2020), and the National Environmental Standard for Freshwater Management (NES-FM)**

The Freshwater NPS sets out how Councils will manage water quality and quantity. This AMP recognises the importance of protecting freshwater essential to the health and well-being of the wider environment and will be incorporated in management practices.

### **Te Mana O Te Taiao Aotearoa NZ Biodiversity Strategy**

This strategy, launched in August 2020, sets out a strategic framework for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity, in New Zealand, from 2020 to 2050. This AMP recognises the importance of biodiversity essential to the health and well-being of the wider environment.

## **Nelson Biodiversity Strategy**

This Strategy was adopted in May 2007 and recognises the differing ecosystems that range from the mineral belt, to tall podocarp river flats, coastal cliffs, estuaries, and the greater marine environment. The key goals include the Active Protection of Native Biodiversity and Ecologically Sustainable Use of Biodiversity. The plan includes an action for council to retire Council owned forestry areas back into native forest where this buffers existing native vegetation and opportunities allow. Council is complying with this as part of its retirement regime and riparian work.

## **The National Environmental Standards for Plantation Forestry (NES-PF)**

Were published on 3 August 2017 and came into force on 1 May 2018.

The NES-PF were published on 3 August 2017 and came into force on 1 May 2018 with objectives to:

- maintain or improve the environmental outcomes associated with plantation forestry activities
- increase the efficiency and certainty of managing plantation forestry activities.

Councils previously managed the environmental effects of forestry activities through regional and district plans. As a result, the rules varied between and within regions. Sometimes these variations reflected local differences and community priorities. But where they didn't, it caused problems for the many forest owners who manage forests in 2 or more regions or have forests that straddle council boundaries. The variation resulted in:

- increased costs
- uncertainty about the plan rules they must follow.

The variations in rules also led to inconsistent environmental outcomes. The NES-PF provides a consistent set of regulations for plantation forestry activities. It covers 8 core plantation forestry activities, allowing these to be carried out as permitted activities, subject to conditions to manage potential effects on the environment.

Where it isn't possible to manage these effects – for example, the site is at high risk of erosion and needs greater controls – the activity requires resource consent.

How the NES-PF works - The NES-PF regulations cover 8 core plantation forestry activities that have potential environmental effects:

- afforestation (planting new forest)
- pruning and thinning to waste (selective felling of trees where the felled trees remain on site)
- earthworks
- river crossings
- forestry quarrying (extraction of rock, sand, or gravel within a plantation forest or for operation of a forest on adjacent land)

- harvesting
- mechanical land preparation
- replanting.

Impact on NCC Forestry operations - Some examples of the impact of conditions under the NES-PF regulations on NCC forestry operations are:

- setbacks when planting near rivers, lakes, wetlands, and coastal areas. These unplanted strips protect against erosion and sedimentation from afforestation
- identification and maintenance of storm water and sediment control measures for forestry activities
- bridging the Maitai River instead of building a concrete slab ford.

### Erosion Susceptibility Classification

The Erosion Susceptibility Classification (ESC) is the method which determines the level of controls imposed by the NES PF. ESC is classified into four erosion risk categories; Low (green), Medium (yellow), High (orange) and Very High (red) and has been determined based on a combination of erosion susceptibility (e.g. soil type), likelihood and severity of an erosion event, and the downstream consequences of an erosion event.

The NCC forest estate is considered medium risk under the Erosion Susceptibility Classification because despite being on steep land, they are located on very stable soils and underlying geology (**Table 2.2**). Erosion risk to the NCCs forests primarily lies with the deposition of fine sediment into waterways, which under the NES PF is deemed as manageable under the minimum requirements.

**Table 2.2: Erosion Susceptibility Classification by forest**

Forest	Erosion Susceptibility Classification
Maitai	100% Moderate
Brook	100% Moderate
Marsden	100% Moderate
Roding	98% Moderate and 2% High

Impact on NCC Forestry operations - Some examples of the impact of conditions under the NES-PF regulations on NCC forestry operations are:

- Setbacks when planting near rivers, lakes, wetlands, and coastal areas. These unplanted strips protect against erosion and sedimentation from ongoing forestry operations.
- Identification and maintenance of storm water and sediment control measures for forestry activities
- Bridging the Maitai and Roding rivers instead of utilising ford crossings.

## 2.3 Current Level of Service

**Table 2-3: Forestry Levels of Service Background and Targets**

What Council will provide	Performance Measures & Targets
Financial return: Maximum economic return provided environmental impacts are minimised as far as practical.	Operational management is outsourced. Radiata pine is the principal forest species. Management and operational costs and log revenues meet market rates.
Sustainability: Management of the forests in such a way as to ensure their long-term economic, social, and environmental sustainability.	Compliance with NZ forest industry codes of practice. A long-term commitment to maintaining well managed forests under generally accepted sustainability standards. FSC accreditation.
Quality: Forests are well maintained, and post-harvest areas comply with contractual terms for quality.	Forest maintenance and protection practices meet best practice standards; post-harvest forest conditions comply with contractual agreements.
Accessibility: Forests remain accessible to recreational users.	Designated tracks maintained and remain open unless conditions dictate otherwise. Tracks closed during harvesting.

**Table 2-4: Forestry Levels of Service**

				Performance Targets			
Community Outcomes	Level of Service	Performance Measurement	Previous and Current Performance	21/22 (Year 1)	22/23 (Year 2)	23/24 (Year 3)	24-28 (Years 4 to 10)
Our unique natural environment is healthy and protected	Maintained to good standard	Achieve Forest Stewardship Standard	Previous and current	Accreditation achieved	Maintained	Maintained	Maintained
	Achieve NES standards	No breaches	New	No breaches	No breaches	No breaches	No breaches
Our infrastructure is efficient, cost effective and meets current and future needs	Financial returns	Costs and income meet NCC budget targets. Target allows for market price fluctuations.	Previous and current	Maximise Council Treasury and Investment Policy	Maximise Council Treasury and Investment Policy	Maximise Council Treasury and Investment Policy	Maximise Council Treasury and Investment Policy

### **3. DEMAND (PLANNING FOR THE FUTURE)**

#### **3.1 Demand Drivers**

Unlike most other councils' forestry holdings, Nelson City Council has encouraged recreational development and use of its production forests. This does raise the potential for conflict between production values and the suite of values ascribed to, and uses of, the production forest resource.

The potential for conflict has been further heightened by recent developments adjacent to existing production forests such as residential subdivision development, and changes in the community's environmental awareness (for example, landscapes and water quality).

Implementation of the 2016 forestry review report is expected to mitigate or minimise conflict with non-timber values and uses of the forest area.

Implementation of the report's recommendations will reduce the production area from its 2016 area by 25% by removing areas where there is conflict with other values or uses. This will leave a production area that will be sustainable in the long term.

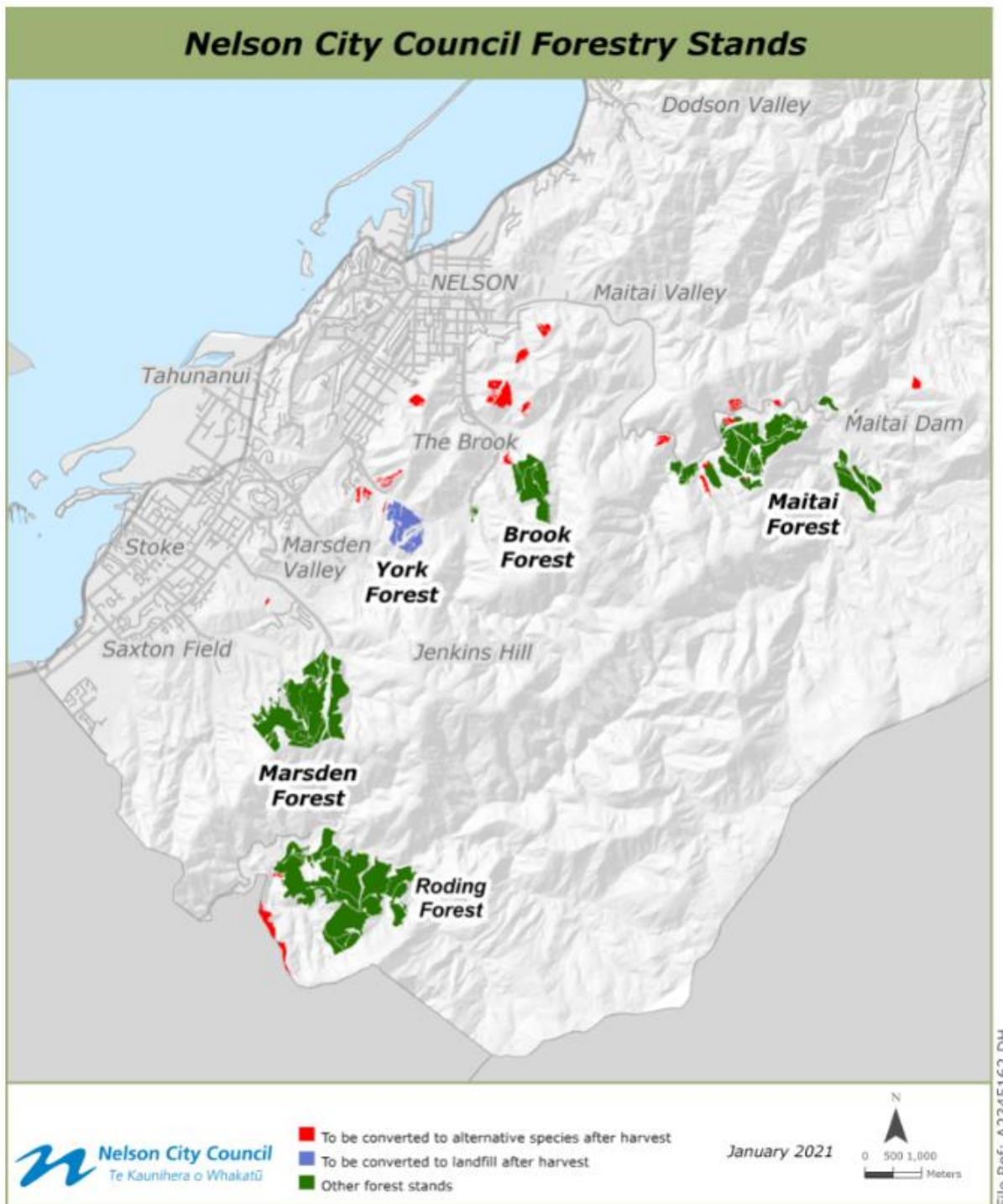
Council also intends not to delay harvesting beyond generally accepted clear fell ages. Much of the Council's current production forest is close to harvestable age. This puts it slightly (2–5 years) ahead of a spike in log availability from Nelson-Marlborough forests. The actual rate of harvest will be driven by market demand and logistics, but there will be more competition in the log market during this plan.

## 4. LIFECYCLE MANAGEMENT (HOW WE PROVIDE THE SERVICE)

### 4.1 Background Data

#### 4.1.1 Description of assets

Figure 4-1: Nelson City Council Forests



Council owns 694 hectares of production forest land spread across four blocks — Brook, Maitai, Marsden and Roding. The Brook block contains a sizeable area within the York Valley (35.1 hectares) on land that has been set aside for landfill expansion, where the trees may not reach harvestable age, depending upon the rate of landfill expansion. 18.4 hectares of Radiata pine on Bell Island in Tasman District is managed separately by the Nelson Regional Sewage Business Unit.

The following table and map describe the Council’s forestry blocks.

**Table 4-1: Forestry Block Descriptions**

<p><b>Maitai</b> <b>186.8 hectares</b></p>	<p>The Maitai Forest is made up from several small blocks, which stretch from several kilometres to the east of the city for approximately 10 kilometres on the Maitai Valley Road. Approximately a quarter of the stocked area falls within the Maitai water reserve area. The remaining forest areas are on predominately steep hill country, which drops down into the Maitai River. Although these areas fall outside of the physical water catchment area they have been regarded as buffer zones for the catchment.</p> <p>Access is from Maitai Valley Road via formed tracks to compartments 3 to 10. Access to compartments 1 and 2 is currently via Koata Ltd land, through forestry managed by Tasman Pine Forests Ltd.</p> <p>Some of the Maitai stands are recommended to be retired for alternative landuse, mainly those in proximity to the Maitai River or the Maitai Dam. There is some recreation activity through these forests, including some mountain biking trails and a section of the Coppermine Trail.</p>
<p><b>Marsden</b> <b>142.4 hectares</b></p>	<p>Marsden Forest is located 4 kilometres south east of Stoke at the end of the sealed Marsden Valley Road.</p> <p>The main plantation is on north-facing slopes on the Barnicoat Range between Jenkins Hill and Saxton Hill. The forest bounds an indigenous reserve on the north-eastern side with farmland to the west and neighbouring exotic forest plantation to the south.</p> <p>Formed access roads connect with Marsden Valley Road.</p> <p>The forest attracts a range of recreation activities, primarily accessed through Glider Road. This includes walking, running, paragliding and access to popular mountain bike trails such as Involution. A stand of Douglas fir on the higher slopes are harvested and will be replanted in radiata pine.</p>
<p><b>Brook</b> <b>(Includes York Forest &amp; College Block).</b> <b>132.4 hectares</b></p>	<p>The Brook Forest is in four separate blocks.</p> <p>One block is a backdrop to the Brook Street section of Nelson City.</p> <p>The second is further up the Brook Valley on steep hill country.</p> <p>The third is in York Valley behind the Bishopdale suburb of Nelson City. Part of the York Valley Block is on land designated for refuse disposal.</p>



	<p>The fourth area is located on the Grampians and is a north facing slope above a residential area of Nelson City.</p> <p>All these areas are heavily used for recreation including the Grampians, Codgers Trails, and the Coppermine Trail. The majority of the forestry stands in the Brook are recommended for retiring for alternative landuse, with the exception of the blocks on Fringed Hill.</p>
<p><b>Roding</b> <b>232.5 hectares</b></p>	<p>Roding Forest is located approximately 13 kilometres east of Richmond at the end of the metalled Aniseed Valley Road. The forest is within the waterworks reserve and is bounded by reserve on all but the south-western boundary, which is exotic pine plantation.</p> <p>The topography is generally very steep, and the altitude rises to 900 metres.</p> <p>Recreation is less common in these areas due to the distance from urban areas, however the Roding has a rich mining history and there are a number of remaining remnants. Walking and mountain biking is popular, albeit on a smaller scale.</p> <p>Some areas e.g. the higher slopes of Mt Malita have been recommended to be retired into alternative use.</p>

Source: Nelson City Council's production forests- Assessment of non-monetary values. Catalyst 2016 (A1591849)

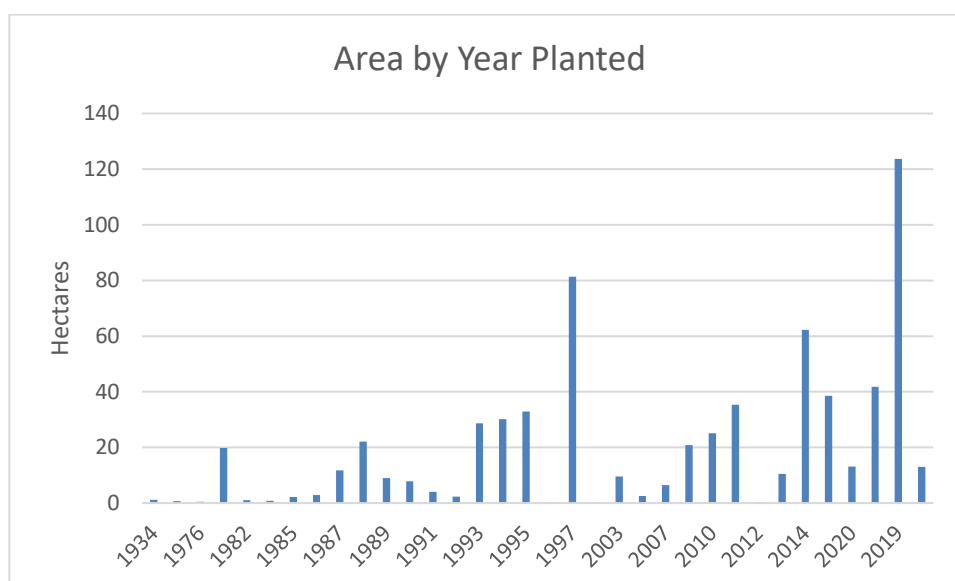
The forest species are primarily Radiata pine and Douglas Fir as shown below.

**Table 4-2: Forest Species Area**

<b>Species</b>	<b>Area (hectares)</b>
Radiata pine	589.8
Douglas Fir	29.9
Cypress	11.0
Redwood and other softwoods	3.1
Eucalyptus and other hardwoods	5.9
Cutover and retirement areas	54.4
Total	694.1

The distribution of area by year planted/replanted is quite irregular which is due to the original uneven planting rate. The Roding block is into its third rotation of plantings (i.e. there have been two tree harvests from this block previously), the Brook block and parts of the Maitai block are in their second rotation, and the remainder of the Maitai block and Marsden blocks are in their first rotation.

**Figure 4-2: Forestry Area distribution by year planted**



#### **4.1.2 Asset valuations**

As at 30 June 2020, the market value of the tree crop owned by Council, assessed for financial reporting purposes, is estimated at \$7.115 million plus GST (if any).

The assessed value is the estimated market price that would be agreed between a willing seller and a willing buyer, both well informed and conducting an arm's length transaction. This value is for the tree crop only and does not include the value of the land or improvements thereon such as tracks and fences.

The value of the tree crop is estimated by assessing the net present value of estimated future costs and revenues pertaining to the standing crop, using a discount rate derived from recent forest transactions. A discount rate of 6.0% has been applied to the post-tax costs and revenues pertaining to the tree crop. The tax perspective adopted is that of a purchaser.

The valuation methodology applied meets New Zealand Accounting Standard NZ IAS 41, and the New Zealand External Reporting Board Public Benefit Entities Standard IPSAS 27, Agriculture. This valuation also complies with the NZ Institute of Forestry Forest Valuation Standards.

## **4.2 Operations and Maintenance Plan**

### **4.2.1 Operations and maintenance plan**

The contracted forest manager prepares plans and budgets for Council approval and is responsible for programming, controlling, and reporting of forest operations. A work programme and associated budget is prepared for the financial year commencing 1 July by the forest managers and is presented to the Forestry Subcommittee during October of the preceding year.

The forests are forecast on average to produce a substantial positive annual cashflow through to 2025, followed by a ten-year period of forest losses (due to very little harvest activity, as trees are not at harvestable age), and followed again by an extended period of forecast profit.

#### **4.2.2 Maintenance and harvest**

Annual forest health inspections have been carried out under the NZ Forest Owners Association Scheme throughout all the Council's forests. No significant pests or diseases of concern have been detected.

Most of the forests are marginally deficient in nitrogen and phosphate but not at levels that it would be economic to warrant application of fertiliser. The trace element Boron is also at marginal levels in most of Nelson forests. Foliage sampling of 3-year-old trees is routinely carried out and where levels are marginal, corrective applications with ulexite fertiliser are carried out. An allowance is made in the annual costs for Boron fertilising of stands at age 3.

Infection levels from the needle cast fungus *Dothistroma pini* are assessed annually, and stands are aerially sprayed with copper fungicide as required.

Operational schedules are driven by the strategy agreed under the 2016 review. Designated stands include stands that will be cleared to waste as soon as possible to remove the risk of wilding spread; stands that will be replanted and managed as production forest; and stands that will be converted to a non-timber use after their scheduled harvest. Funding has been included in Landscape Reserve budgets to complete conversions of selected areas from productive forestry to alternative uses. For the blocks identified for alternative use a general assessment as to their future management (native plantings, native regeneration, or alternative exotic species) has been made and this is contained in the Forestry Alternate Management Plan (A1989331).

#### **4.2.3 Area specific management practices**

The forestry plantations are currently managed by PF Olsen Ltd (PF Olsen) from the Nelson Branch Office with backup from the company's head office in Rotorua.

PF Olsen has comprehensive quality management and environmental management systems in place. These systems are independently certified to ISO 9002 and 14001 standards respectively.

#### 4.2.4 Replanting / Weed control budgets for Alternate Use Plan

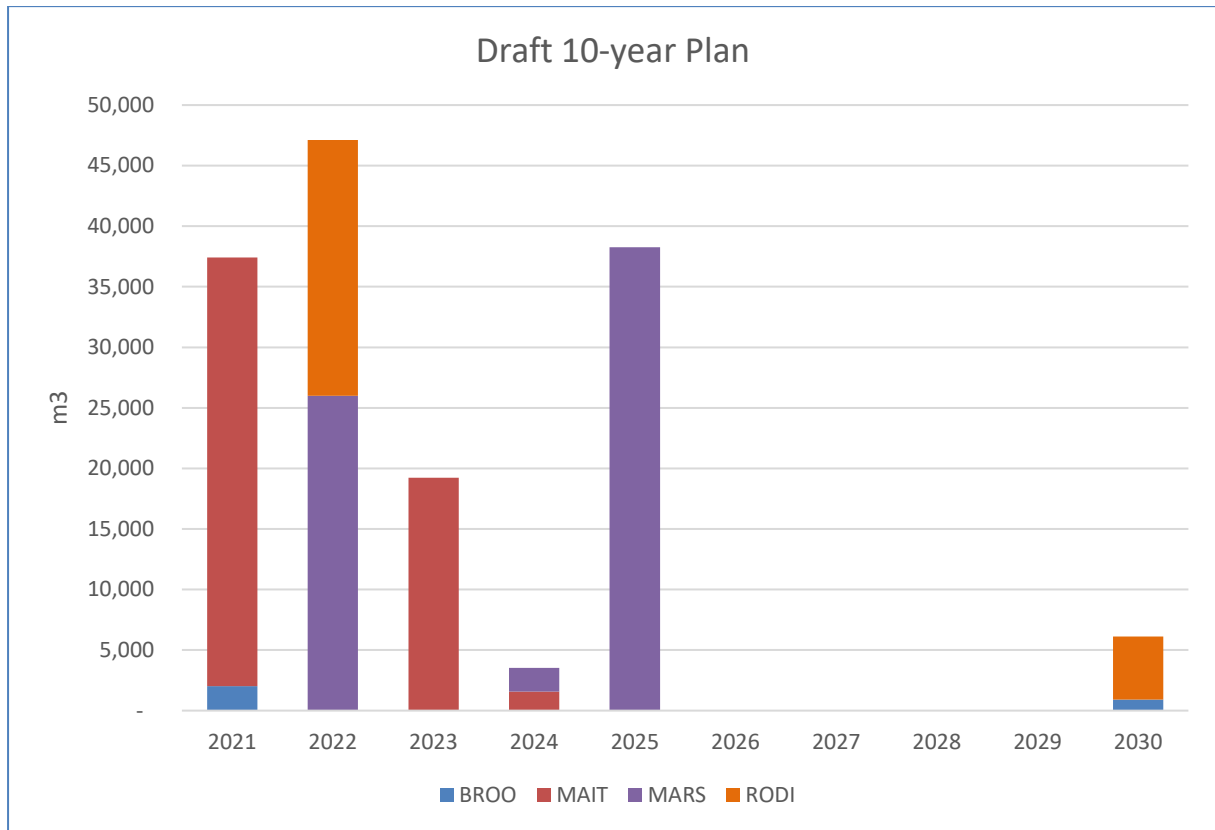
<b>Financial Year</b>	<b>Operational Budget (weed control) *</b>	<b>Capital Budget (Planting) **</b>
2021/2022	\$29,000	\$205,000
2022/2023	\$30,000	\$141,000
2023/2024	\$28,000	\$278,000
2024/2025	\$30,000	\$120,000
2025/2026	\$23,000	\$79,000
2026/2027	\$25,000	\$13,000
2027/2028	\$22,000	\$10,000
2028/2029	\$24,000	\$10,000
2029/2030	\$20,000	\$10,000
2030/2031	\$21,000	\$10,000
<b>Total</b>	<b>\$252,000</b>	<b>\$876,000</b>

\* Part of Forestry \*\* Part of Parks and Reserves Activity Budgets

#### 4.2.5 10 Year Harvesting Plan

Per Year	Brook (Ha)	Maitai (Ha)	Marsden (Ha)	Roding (Ha)	Total Area (Ha)
2021	4	50			54
2022			46	27	73
2023		29			29
2024		5	6		11
2025			51		51
2026					
2027					
2028					
2029					
2030	2			10	11

Per Year	Brook (m <sup>3</sup> )	Maitai (m <sup>3</sup> )	Marsden (m <sup>3</sup> )	Roding (m <sup>3</sup> )	Total Area (m <sup>3</sup> )
2021	2,032	35,380			37,412
2022			25,995	21,111	47,106
2023		19,217			19,217
2024		1,577	1,953		3,530
2025			38,250		38,250
2026					
2027					
2028					
2029					
2030	907			5,203	6,110



#### 4.2.6 Post-harvest land management

Harvested areas in the production zone are prepared and replanted in either the subsequent winter or the next one. Young stands are thinned once and pruned in two stages on more fertile sites.

The post-clearing management of land in the other categories is under consideration.

As all of the forests already have plantation crops in situ, the harvesting of the current crop is the trigger for the restarting of the rotation. Harvested areas in the production zone are prepared and replanted in either the subsequent winter or the next one.

Land preparation prior to planting includes the raking of slash by excavators into windrows on less steep terrain, and the blanket spraying of weeds with a helicopter.

Planting is carried out using high-quality genetic seedlings which have improved growth, disease resistance and wood characteristics.

Following planting, seedlings are sprayed either using knapsacks or blanket helicopter sprays which targets weeds, allowing the seedlings to get ahead.

At age 8, 30% of the worst trees are thinned to a final crop stocking of 600 stems/ha.

The target optimum rotation age for harvesting is age 28.

## **4.3 Renewal/Replacement Plan**

### **Roading and infrastructure**

Roads and landings built for previous harvesting operations in second or third rotation areas are generally reused for current harvesting operations. In first rotation stands existing track systems are significantly upgraded as width, water tabling, corner radius, and metalling are in most cases inadequate for harvesting traffic.

The main requirement of the roading plan is that roads are constructed between 6 and 12 months prior to logging. Harvesting landings and associated spur roads may be constructed closer to the commencement of harvesting.

## 5. RISK MANAGEMENT PLAN (DEALING WITH UNCERTAINTY)

Applying risk management procedures enables decisions to be made about the best use of limited resources to achieve as much as possible of the Council's objectives from the maintenance and development of the forestry assets.

Threats and opportunities are assessed against forestry objectives and levels of service.

Risk management is not simply about uncertain events with a downside (such as financial loss or legal proceedings); the process can also be used to identify and decide on the merits of uncertain opportunities for the Council to do things more innovatively, sustainably, and effectively.

### 5.1 Risk Management Plan

Nelson City Council is committed to using risk management principles and techniques to understand and appropriately manage all internal and external factors and influences which affect the achievement of its objectives. Doing this will:

- Provide a reliable basis for sound decision making
- Increase the likelihood of achieving objectives
- Provide an agreed basis for prudent risk taking
- Enable the organisation to understand the level of risk associated with each decision as well as the Council's aggregate exposure to risk
- Improve accountability and assurance of control
- Enable the Council to avoid threats and seize opportunities
- Foster an organisational culture based on reasonable foresight and responsible hindsight.

The Council's standardised risk assessment method explicitly follows the process part (section 5) of AS/NZS 31000:2009.

#### 5.1.1 Fire

Fire is an ever-present danger to the forests especially as recreation reserves and roads border them. The fire danger is compounded by high summer temperatures and the presence of a very heavy understorey scrub vegetation layer which is highly flammable.

Fire Emergency New Zealand (FENZ) Rural Fire Network is the fire control authority with respect to all forests. A fire control plan which includes surveillance and response measures, contact details, and forest access and location maps is updated annually. Adequate supervision of public access and



recreation areas is carried out to ensure fire risk from this source is minimised. Public access and the use of plantation and recreation areas may be excluded during periods of extreme fire danger. Regular maintenance of internal forest roads, firebreaks, fire ponds and road signage are required. Refer to Parks and Reserves, Fire Risk Procedures, A2240085.

### 5.1.2 Fire Risk Assessment of NCC Forestry Blocks

In light of the recent fires in Tasman the Forestry Sub-Committee requested an analysis of the potential fire risk to their forestry blocks and consideration of options for reducing this risk.

### 5.1.3 Methodology

The fire risk has been determined using a Fire Risk Matrix that considered three components: the fire potential, the potential fire intensity and the potential fire damage or hazard. The definitions of these are:

**Fire potential**—the probability that a fire might ignite. Determined by ease of access, public use, proximity to population and the presence of fuel for a fire to start.

**Fire intensity**—the magnitude of the flames, strength of the fire, speed at which it expands and potential scale of the fire. Determined by the state of the fuel, vegetation, current weather, or the environmental conditions, easy or difficulty to control.

**Fire damage or hazard**—the potential associated damage and destruction. Determined by the adjacent land use and proximity to residential dwellings etc.

The following table shows the Fire Risk Matrix.

Fire Damage	Fire Potential	Low				Medium				High			
	Fire Intensity	Low	Med	High	Extr	Low	Med	High	Extr	Low	Med	High	Extr
Insignificant	L	L	M	M	M	L	L	M	M	L	M	H	H
Minor	L	M	M	M	M	M	M	M	H	M	M	H	H
Moderate	M	M	M	H	H	M	M	H	H	M	H	H	E
Major	M	M	H	H	H	M	H	H	E	H	H	E	E

Key – L = low, M = Medium, H = High, E = Extreme

In using the above matrix, the Fire Potential is first determined by ranking it as either low, medium and high. Then the potential Fire Intensity is ranked from low to extreme. This is then followed by the rating of the potential Fire

Damage from insignificant to Major. From here the Potential Fire Risk is determined.

If you use the forestry at the Marsden Valley Block as an example, the fire potential is high due to its easy access to the public and the number of people that pass through that area. The fire intensity was considered medium as the pines are pruned and the Douglas at the top of the hill are considered lower risk due to their higher stocking and overall moisture content compared with pines. The fire damage was considered as moderate due to the surrounding landuse and associated vegetation. The overall fire risk would be rated as high.

To reduce the risk requires reducing one of the risk components. Using the Marsden Valley block as an example the potential for a fire to start can be manipulated by restricting access when the vegetation index is high or the amount of fuel reduced by pruning where there is high public access.

#### **5.1.4 Results**

The following table details the results from the different blocks and the opportunities to reduce the risk.

<b>Block</b>	<b>Fire potential</b>	<b>Fire Intensity</b>	<b>Fire Damage</b>	<b>Overall risk</b>	<b>Opportunities / comments</b>
Marsden Valley	<b>High</b>	<b>Medium</b>	<b>Moderate</b>	<b>High</b>	<p>Limit access when the vegetation index gets to a certain level starting with partial restriction through to total restriction.</p> <p>Consider for the next rotation pruning buffer zones adjacent to the high use areas for the public.</p>
Maitai	<b>High</b>	<b>Medium</b>	<b>Moderate</b>	<b>High</b>	<p>Limit access when the vegetation index gets to a certain level starting with partial restriction through to total restriction. This should ideally be led by the parks and reserves team.</p> <p>Consider for the next rotation pruning buffer zones adjacent to the high use areas for the public.</p>
Brook – Fringe Hill compartments	<b>High</b>	<b>High</b>	<b>Moderate</b>	<b>High</b>	<p>Public access in this area in the future may increase from expansion of mountain biking track network.</p> <p>Limit access when the vegetation index gets to a certain level starting with partial restriction through to total restriction.</p> <p>There is an option to reduce the risk of the Fringe Blocks by pruning these stands. A decision on this needs to be made now due to the age of the trees.</p>

Brook – Codgers (being retired for alternative use)	<b>High</b>	<b>High</b>	<b>Moderate</b>	<b>High</b>	The 2011 stand is unpruned and un thinned. Creating a pruned buffer zone adjacent to mountain bike tracks is an option or whole block pruning.  The alternative species – higher flammability species have been planted however these are considered less risky than the alternative gorse and broom areas.  Limit access when the
Brook - York (rubbish dump) (being retired for alternative use)	<b>High</b>	<b>High</b>	<b>Moderate</b>	<b>High</b>	There should be a fire break between the landfill and the trees to minimise the risk from the landfill site.
Roding	<b>Low</b>	<b>High</b>	<b>Minor</b>	<b>Medium</b>	No actions required.

### 5.1.5 Conclusions

1. There is an overall high fire risk potential for the Brook (including the York), Maitai and Marsden Valley forestry blocks owned by NCC whilst the Roding is medium. The potential for ignition, intensity and damage does however vary between blocks. To reduce the overall potential is easiest achieve by either reducing the potential for the fire to ignite or by reducing the intensity by fire through management.
2. Contractors or forestry workers have trigger points based on a vegetation index as to what tasks that can be undertaken and whether partial or full restriction is required over the high fire risk period. These strategies need to be extended to public access rather than just open or closed irrespective of other variables.
3. The amount of fuel can be manipulated with pruning and thinning buffer zones adjacent to high access areas. This will come at a cost of approximately \$3,550/ha.
4. The Forestry Advisory Group need to make a decision on the Fringed Hill block as to whether the risk on the young stands should be reduced through pruning. These trees are at an age where this decision cannot be delayed otherwise the trees will become too large.

## **5.1.6 Other risks**

### **Market risks**

There is a risk that the price of logs delivered to export, and domestic markets may fall to levels that significantly reduce the net return to Council or make harvesting a stand uneconomic. Export log price slumps happen regularly but their duration is short. They are caused by the build-up of excessive log inventory in importing countries, changes in exchange rate and increases in shipping rates. The domestic market is much more stable. The outlook for log prices is that they will continue at their long-term level with possible upside potential. Drivers are demand in Asia, competition from other countries, global growth rates and the development of manufactured timber products in New Zealand. Marketing of logs from Council forests is also diversified between export and domestic customers so that reliance on the more volatile export market is reduced.

### **Off-site impacts from forestry**

Trees may fall and slip down slopes. This risk which is greater during harvesting has been mitigated by not replanting areas on steep land above residential areas.

There is also a risk that slash (small timber and branches left after harvesting) may be flushed down steep slopes during high-intensity rain events, damaging farmland, and buildings on downstream properties. This is mitigated as far as possible by logging practices that avoid the accumulation of slash in waterways and on steep slopes around landings and following resource consent requirements.

Transporting logs through urban areas to mills and the port can create a risk to pedestrians, especially around schools. This is being mitigated by imposing speed limits that apply to high-risk zones for certain times of the day.

### **Injury to recreational users of forests during harvesting**

Public use of roads and tracks during harvesting can be dangerous due to logging truck movements, tree felling and extraction. This is managed by implementing traffic control practices with VHF radio communication on the roads used by logging trucks. The public are excluded from harvesting sites while the operations are in progress. User groups such as mountain bikers are notified of the closure of specified tracks in advance of the operations, and harvesting may be rescheduled to avoid conflict with recreational events.

### **Wind**

Unusual high-intensity wind events can cause large areas of damage with trees blown down or broken. This risk is mitigated by early thinning which promotes wind stability and not delaying harvesting as taller trees are more at risk. Financial loss is mitigated by insurance and salvage of wind thrown trees.

## Damage by insect attack and fungal pathogens

This is potentially a significant risk if certain insects or pathogens find their way into New Zealand. Fortunately, any impacts to date have been manageable especially by ensuring stands are healthy by appropriate thinning practices and not planting them on sites where the environmental conditions may make them more susceptible.

## 5.2 Risk Assessment

### 5.2.1 Top risks and how these will be managed

The level of risk established from the assessment process (formally called residual risk) is compared with the Council's residual risk tolerance as set out in Table 3 of the Council's risk criteria.

The table sets out priorities for action and at what level of Council decisions should be taken to either accept (tolerate) the risk or take further actions to manage the risk to achieve a more acceptable risk level.

In many cases risks have already been acted on by officers in the course of the normal work of managing the forestry activity and no further action is required.

In other cases, specific decisions may be required to either accept the current level of risk or place actions in this plan to reduce the level of risk.

The following table provides an indication of areas of high residual risk and some information about how these could be further treated (i.e. further controls implemented, or choices made to reduce risk levels).

**Table 5-1: Forestry Risk Summary**

<b>RISK REGISTER</b>					
<b>Risk Description</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Rating</b>	<b>Existing Controls</b>	<b>Response</b>
Prices in international markets fluctuate beyond assumed range	Major	Possible	High 16	Stop harvesting if prices fall too low	Accept
Trees fall due to wind/rain that cause damage to buildings or injure people	Major	Unlikely	Medium 5	Do not replanting in high-risk areas	Accept
Injury to recreational users of forests during harvesting	Major	Unlikely	Medium 6	Notify users of harvesting	Accept
Forest fire	Major	Possible	High 16	FENZ and Parks processes	Accept
Environmental impacts from forestry	Major	Possible	High 16	Follow resource consent requirements	Accept

### 5.3 Infrastructure resilience approach

**Table 5-2: Forestry Insurance Cover**

<b>Tree Crop</b>	Full replacement value based on most recent tree crop valuation
<b>Replanting</b>	\$3,500 per hectare
<b>Public Liability</b>	Council's own cover
<b>Fire Fighting</b>	\$500,000 extension to PL cover to meet requirements of Fire and Emergency New Zealand Act 2017
<b>Wind</b>	\$500,000

## 6. FINANCIAL SUMMARY (WHAT IT WILL COST AND HOW WE PAY FOR IT)

Financial Statements and Projections - Table 6-1: Ten Year Forecasts

	Budget (2021/22)	Budget (2022/23)	Budget (2023/24)	Budget (2024/25)	Budget (2025/26)	Budget (2026/27)	Budget (2027/28)	Budget (2028/29)	Budget (2029/30)	Budget (2030/31)
	\$000's	\$000's	\$000's	\$000's	\$000's	\$000's	\$000's	\$000's	\$000's	\$000's
<b>Operating (Surplus) / Deficit</b>	<b>235</b>	<b>(1,589)</b>	<b>(298)</b>	<b>(1,136)</b>	<b>630</b>	<b>463</b>	<b>513</b>	<b>534</b>	<b>532</b>	<b>465</b>
<b>Income</b>	<b>(3,050)</b>	<b>(6,599)</b>	<b>(3,213)</b>	<b>(4,429)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Brook / York Valley Forest	(795)		(341)							
Maitai Forest	(1,320)	(4,170)	(976)							
Marsden Forest	(935)		(1,896)	(4,429)						
Roding Forest	0	(2,429)								
<b>Expenses</b>	<b>3,285</b>	<b>5,010</b>	<b>2,916</b>	<b>3,294</b>	<b>630</b>	<b>463</b>	<b>513</b>	<b>534</b>	<b>532</b>	<b>465</b>
Staff Operating Expenditure	200	205	209	212	218	221	225	230	236	241
Forest management: Brook/York	14	23	58	21	11	12	10	10	10	10
Forest management: Maitai	30	114	144	56	42	24	73	20	20	20
Forest management: Marsden	20	43	79	130	133	35	35	15	15	15
Forest management: Roding	60	61	79	28	82	24	24	109	104	30
Forest management: General	90	79	79	79	79	79	79	79	79	79
Brook/York Valley Harvest Costs	820		358							
Maitai Harvest Costs	895	2,937	687							
Marsden Harvest costs	690		1,154	2,696						
Roding Harvest Costs	0	1,479								
Rates	6	6	7	7	7	7	7	8	8	8
Insurance	27	28	28	29	30	31	31	32	33	34
Valuation Fees	4	4	4	4	4	4	4	4	4	4
Tantragee Hazardous tree removal	300									
Forestry disestablishment	29	31	29	32	25	27	25	27	23	25
Commercial Species Investigation	100	0	0	0	0	0	0	0	0	0
<b>Source of Funds</b>	<b>860</b>	<b>(1,323)</b>	<b>(124)</b>	<b>(866)</b>	<b>630</b>	<b>463</b>	<b>513</b>	<b>534</b>	<b>532</b>	<b>465</b>
Transfer from Reserves	860	(1,323)	(124)	(866)	630	463	513	534	532	465
<b>Capital Expenditure</b>	<b>625</b>	<b>266</b>	<b>174</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Brook/York Valley Roding	80		16							
Maitai Bridge & Roding	125	181	42							
Marsden Roding	60		115	270						
Roding Bridge & roading	360	84								



## **7. APPENDICES**

### **7.1 Forestry Subcommittee Terms of Reference**

# Terms of Reference

## Forestry Subcommittee

### 1. Purpose

The purpose of the Forestry Subcommittee is to:

- Maintain oversight (ie ensure that works are being undertaken in line with sound management practices) on all matters relating to the commercial forestry operational portfolio including environmental and recreational issues;
- Focus on effective management of forestry in conjunction with governance oversight; and
- To recommend decisions relating to the forestry activity to Council.

### 2. Membership

The Group membership is as follows:

<b>Chair</b>	<ul style="list-style-type: none"> <li>• External appointee</li> </ul>	Decision-maker (Voting rights)
<b>Members</b>	<ul style="list-style-type: none"> <li>• Mayor</li> <li>• Chair of Community and Receptions Committee</li> <li>• Chair of Environment and Climate Committee</li> </ul>	Decision-makers (Voting rights)
<b>Officers</b>	<ul style="list-style-type: none"> <li>• Officer with responsibility for forestry</li> <li>• One other officer</li> </ul>	To provide advice (No voting rights)
<b>Independent Forestry Expert</b>	<ul style="list-style-type: none"> <li>• External appointee</li> </ul>	To provide advice (No voting rights)

The Subcommittee will meet every 3 months (or more frequently if required).

### 3. Quorum

A quorum for any meeting will be five, being the Chair, at least two elected members, one Council officer and the independent forestry expert.

### 4. Areas of Responsibility

The Subcommittee's areas of responsibilities are to maintain oversight of all matters relating to the commercial forestry operational portfolio, including environmental and recreational issues.

All media releases will come from the Chair who will liaise with Council's Communications team as required.

Commercial forestry is defined as Council's productive *pinus radiata* forests (around 500 Ha) spread across four main blocks in the Brook, Maitai, Marsden and Roding catchments.

## **5. Powers to decide**

Powers to decide in order to ensure operational continuity include:

- Forestry and harvesting management plans (including replanting) as prepared by the forestry contractor and endorsed by the independent forestry expert; and
- Engagement of consultants required to undertake all works necessary to guide recommendations to Council.

## **6. Powers to recommend**

Powers to recommend to Council will include all actions relating to the oversight of all other matters relating to the commercial forestry portfolio, falling outside the powers to decide, in accordance with Council's Annual Plan and Long Term Plan as follows:

- Approve forestry-related budgets;
- Decide on any matters relating to continuing commercial forestry operations; and
- Development of the Forestry Activity Management Plan, for recommendation to Council

## **7. Role of staff**

Officers and the independent forestry expert will provide technical and financial expertise and an update of project risks.

All meetings and decisions will be minuted, with recommendations made to Council where required.

## **8. Conflicts of Interest**

Conflicts of interest will be declared at the start of meetings.

## **9. Reporting**

The provisions of the Local Government Official Information and Meetings Act 1987 (Part 7) applies to meetings of the Forestry Subcommittee.

This means that:

- Meetings will be publicly notified
- Formal agendas will be prepared, and minutes of meetings taken, and
- Standing orders will apply to all meetings.

## **10. Review Period**

The Forestry Subcommittee will be reviewed at the end of each triennium.