







#### Acknowledgements

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## Enquiries

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# Contents

Figures	iv
Tables	iv
Key facts as at 1 April 2021	1
Overview of the NEFD	4
What is the NEFD? What does the NEFD report on? Who participates in the NEFD? Information on forests smaller than 40 hectares Reliability of Data Other sources of information Who uses the NEFD? Governance of the NEFD	4 4 4 4 4 4 4
What are New Zealand's wood supply regions? What Planting and Harvesting information is collected? Yield tables and Wood Availability Forecasts Online resources	5 5 5 5
Area, Species Distribution, Standing Volume and Ownership of plantation forests in New Zealand	6
Area Area Distribution by wood supply region Species distribution by age classes Silviculture Standing Volume Ownership	6 7 8 9 9
Harvesting	13
An estimate of total harvest volumes for New Zealand Deforestation Intentions Survey Wood Availability Forecasts	13 13 13
Planting New planting	<b>14</b> 15
Nursery Survey	17
Forest area by age class and wood supply region	19
Appendix 1: Glossary	42
Appendix 2: NEFD Steering Committee's Terms of Reference	43
Appendix 3: NEFD Steering Committee	44
Appendix 4: References	45
Appendix 5: National Exotic Forest Description Technical Report	46

# Figures

Figure 1: Forest area by annual age class	1
Figure 2: Wood Supply Regions and Territorial Authorities in New Zealand	3
Figure 3: Changes in planted production forest area in New Zealand	6
Figure 4: Distribution of forest area by wood supply region	7
Figure 5: Forest area by age class and wood supply region	8
Figure 6: Forest area by age class and species	8
Figure 7: Forest ownership	9
Figure 8: Species Distribution	9
Figure 9: Radiata pine by Tending Regime	9
Figure 10: Total planted production forest roundwood removals	13
Figure 11: Total planted area	14
Figure 12: Harvested forest awaiting either replanting or a land use decision	14
Figure 13: New Land Planted in Production Forest in New Zealand	15
Figure 14: Distribution of all species forest area by age class and island	21
Figure 15: Distribution of radiata pine forest area by age class and island	23
Figure 16: Distribution of Douglas-fir forest area by age class and island	25
Figure 17: Distribution of cypress species forest area by age class and island	27
Figure 18: Distribution of other softwoods forest area by age class and island	29
Figure 19: Distribution of eucalypts forest area by age class and island	31
Figure 20: Distribution of other hardwoods forest area by age class and island	33
Figure 21: Distribution of radiata pine pruned with production thinning forest area by age class and island	35
Figure 22: Distribution of radiata pine unpruned with production thinning forest area by age class and island	37
Figure 23: Distribution of radiata pine pruned without production thinning forest area by age class and island	39
Figure 24: Distribution of radiata pine unpruned without production thinning forest area by age class	

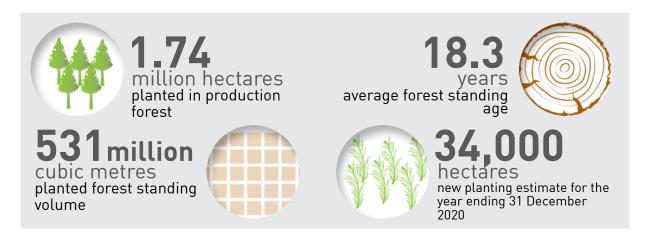
41

and island

## Tables

-	able 1: National exotic forest estate statistics	2
	Table 2: Survey frequency and data quality by forest size	4
7	Table 3: Total Forest Area (ha)	6
7	Table 4: Forest area by annual age class	7
	Table 5: Area, standing volume, and area-weighted everage age by territorial authority	10
	Table 6: Total area represented by each data source in he 2021 NEFD database	11
7	Table 7: Number of forest owners by national size class	12
1	Table 8: Forest area by forest owner national size class	12
	Table 9: Land cover prior to new planting, year ending December	16
	Table 10: Area planted in all species by territorial authority	20
	Table 11: Area planted in radiata pine by territorial authority	22
	able 12: Area planted in Douglas-fir by territorial authority	24
	Table 13: Area planted in cypress species by territorial authority	26
	Table 14: Area planted in other softwoods by territorial authority	28
	Table 15: Area planted in eucalypts by territorial authority	30
	Table 16: Area planted in other hardwoods by territorial authority	32
	Table 17: Area of radiata pine pruned with production hinning by territorial authority	34
	able 18: Area of radiata pine unpruned with production thinning by territorial authority	36
	Table 19: Area of radiata pine pruned without production thinning by territorial authority	38
	Table 20: Area of radiata pine unpruned without production thinning by territorial authority	40

## Key facts as at 1 April 2021



New Zealand's net stocked planted production forest covered an estimated 1.74 million hectares as at 1 April 2021.

The total planted forest standing volume was estimated to be 531 million cubic metres with an average age (area weighted) of 18.3 years.

The provisional new planting estimate for the year ending 31 December 2020 is 34,000 hectares. This number may be revised in the 2022 NEFD.

Table 1 on the following page provides key national forestry statistics as at 1 April 2021, as well as the statistics for 2019 and 2020 for comparison. Note that the previously published 2020 forest area and standing volume statistics have been revised upward by 52,000 hectares.

The distribution of the forest area by annual age class is shown in Figure 1. The decrease in area as age increases beyond 28 years indicates harvesting. Of particular note is the large area of forest between 23 to 26 years old, planted between 1995 and 1998. This forest has begun reaching harvest age.



Table 1: National exotic forest estate statistics

Area and standing volume statistics	As at 1 April 2019	As at 1 April 2020 published4	As at 1 April 2020 revised?	As at 1 April 2021
Forest area				
Net stocked area (ha)	1,696,604	1,665,237	1,716,575	1,739,971
Harvested area awaiting restocking (ha)	49,194	45,192	50,030	45,487
Total forest area	1,745,798	1,710,429	1,766,605	1,785,458
Growth characteristics				
Standing volume (000 m <sup>3</sup> )	494,635	501,116	512,403	531,395
Average standing volume (m <sup>3</sup> /ha)	292	301	299	305
Area-weighted average age (years)	18	18	18	18
Area by species²				
Radiata pine (ha)	1,525,711	1,494,429	1,545,102	1,571,574
Douglas-fir (ha)	103,430	98,380	102,236	97,584
Cypress species (ha)	9,825	9,987	10,034	9,970
Other softwoods (ha)	23,381	24,295	24,619	24,027
Eucalypts (ha)	21,777	21,485	21,757	21,950
Other hardwoods (ha)	12,481	12,662	12,827	14,866
Radiata pine area by tending regime				
Pruned with production thinning (ha)	140,318	138,754	138,754	136,898
Pruned without production thinning (ha)	547,042	530,346	537,733	520,952
Unpruned with production thinning (ha)	50,733	52,931	52,931	58,121
Unpruned without production thinning (ha)	787,617	772,398	815,684	855,602

Planting statistics	Year ended 31 December 2018	Year ended 31 December 2019 p	Year ended 31 December 2019 r	Year ended 31 December 2020
New planting <sup>3</sup>				
Total estimated new planting (ha)	7,000	19,000	19,000	34,000
Restocking (ha)	40,171	41,207	42,179	42,907

Harvesting statistics <sup>5</sup>	Year ended 31 March 2019	Year ended 31 March 2020 p	Year ended 31 March 2020 r	Year ended 31 March 2021
Estimated planted forest roundwood removal (000 m³)6	36,404	41,200	34,440	34,383
Average harvest age - radiata pine (years)	28.7	29.5	29.1	28.5

- 1. In this report, the area of harvested land that was recorded as awaiting a land use decision has been reported in the area awaiting replanting.
- 2. Individual entries may not add to totals due to rounding. Detailed breakdowns can be found in the Forest area by age class and wood supply region section, page 19.
- 3. The forestry statistics released in this report, and in particular, new planting estimates, may differ from those produced in the Agricultural Production Survey by Statistics New Zealand. These surveys use different survey frames and designs. See Appendix 5 for the method used to estimate new planting for the NEFD.
- 4. The 2018 and 2020 surveys sought data from owners with 40 hectares of forest or more.
- 5. All standing and harvest volumes are reported as recoverable volumes (see Appendix 1).
- 6. Estimate from the annual roundwood removal statistics.
- 7. The net stocked area for 2020 has been revised following updated returns from respondents and corrections of data issues.

Figure 2: Wood Supply Regions and Territorial Authorities in New Zealand



## Overview of the NEFD

#### What is the NEFD?

The National Exotic Forest Description (NEFD) is a Tier 1 Statistic<sup>1</sup> with the purpose of maintaining an authoritative, high quality database of New Zealand's production forests. It has been published annually since 1985 and gives information on New Zealand's exotic planted production forest estate (i.e. exotic forest planted with the primary intention of producing wood or wood fibre).

#### What does the NEFD report on?

This report provides information that describes New Zealand's planted production forests. It consists of summarised statistics on:

- exotic planted production forest area by age class and territorial authority for key exotic species. For radiata pine, the area by age class tables are also provided by silviculture regime;
- standing volume (see Appendix 1);
- national harvesting volume estimates;
- planting estimates for forests larger than 40 ha; and
- forest ownership for forests larger than 40 ha.

#### Who participates in the NEFD?

The NEFD surveys known forest owners and managers with at least 40 hectares of planted exotic production forest. The survey is run on a two-yearly cycle, where all known forest owners with 40 or more hectares of forest are surveyed one year (census), and the next year only owners with more than 1,000 hectares (sample).

A sample survey was run in 2021. Questionnaires were sent to all known forest owners and managers with at least 1,000 hectares of planted production forest. Around 102 forests were included in the survey with an achieved area weighted response rate of 89 percent.

## Information on forests smaller than 40 hectares

The area for owners with less than 40 hectares is estimated using the 2004 AgriQuality Small Forest Growers (<40 ha) Survey, an imputation based on new planting from 1992-2006, and forests previously surveyed in the NEFD that have dropped below the 40 hectare area cut-off. The estimate is used because of limitations and practicalities of surveying the large numbers of small growers. More information on the methods used for these estimates and the accuracy constraints is in Appendix 5.

#### Reliability of Data

The reliability of data decreases as forest sizes reduce. Forest owners of larger forests (1,000 or more hectares) generally have the systems to provide higher quality data compared to those with small forestry blocks. Work to improve the reliability of the NEFD data is underway. Resulting improvements to the data will be published in future NEFD reports.

Table 2: Survey frequency and data quality by forest size

Forest ownership size (hectares)	Survey Frequency	Data quality
1000ha or more	Annually	Good
999ha to 40ha	Every two years	Medium
Below 40ha	Infrequently	Low

For a detailed description of the methodology employed to collect the data, ensure reliability and to calculate imputations, please refer to Appendix 5.

#### Other sources of information

In addition to the data collected in the surveys, the NEFD uses other government data sources where appropriate. For example, Emission Trading Scheme area and species data can be used instead of surveying with owner permission, and log and roundwood data collected by MPI provides a comparison for harvest volumes. For further information, please refer to the NEFD technical document (Appendix 5). In addition, roundwood removal data is validated against Forest Growers Levy data.

#### Who uses the NEFD?

The data collected in the NEFD is used to inform the forestry sector, the wood processing industry, and central and local government policymakers and planners about New Zealand's planted forest estate. The information also assists with international reporting obligations, and is the foundation for creating wood availability forecasts which identify wood processing opportunities in New Zealand.

#### Governance of the NEFD

Collection and publishing of NEFD information is overseen by the NEFD Steering Committee – a Forest Industry Committee with members nominated by the New Zealand Forest Owners Association, the New Zealand Farm Forestry Association, and the Ministry for Primary Industries. A full list of this committee can be found in Appendix 3.

<sup>&</sup>lt;sup>1</sup> Tier 1 statistics are the most important statistics in New Zealand, essential to understand how well New Zealand is performing and to inform critical decisions. For more information, see: www.statisphere.govt.nz/tier1-statistics.aspx

## What are New Zealand's wood supply regions?

The NEFD groups the sixty-six District and City Councils within New Zealand into nine wood supply regions. These regions have broadly similar growth patterns for radiata pine, representing wood supply and processing catchments. The wood supply regions are: Northland, Central North Island, East Coast, Hawke's Bay, Southern North Island, Nelson and Marlborough, West Coast, Canterbury, and Otago and Southland (see Figure 2 on page 3).

## What Planting and Harvesting information is collected?

Planting data is collected as at 31 December<sup>2</sup> on the area of replanting, afforestation, and land cover before afforestation. A supplementary survey of large forest owners and known afforesters is run at the end of a survey period to provide a provisional estimate of afforestation to the current year. In addition, the NEFD survey collects some data on harvesting from forests over larger than 40 hectares including the average age of clear-felled radiata pine. NEFD harvesting information is combined with other MPI data sources to provide national harvest estimates.

## Yield tables and Wood Availability Forecasts

The yield tables are produced periodically, based on data provided by forest owners and managers of larger forests, as part of the wood availability forecasts.

The yield tables contain yield aggregates of the same species group and tending regime, which are located in the same wood supply region. The yield tables contain the total recoverable volume by three log type volumes (pruned logs, unpruned logs and pulp logs), together with any thinning volume, by annual age class. Each yield table is labelled with a code that defines the wood supply region, species group and tending regime.

Yield tables and Wood Availability Forecasts for all regions and New Zealand are available on the Te Uru Rākau website (see below).

#### Online resources

An electronic copy of this report is available on the New Zealand Ministry for Primary Industries website: https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/The Te Uru Rākau website also has electronic copies of:

- the tables from the report:
- report and tables from the Wood Availability Forecasts; and
- vield tables.

For specialised requests please contact nefd@mpi.govt.nz. For reasons of confidentiality, data on the resources of individual forest growers will not be released without the prior written consent of the forest owner(s) concerned. Any other outputs will have standard confidentiality rules applied.

<sup>&</sup>lt;sup>2</sup> 31 December is used as the year end as planting does not occur in January to March.

# Area, Species Distribution, Standing Volume and Ownership of plantation forests in New Zealand

#### Area

As at 1 April 2021, the total net stocked area of planted forest was estimated to be 1.74 million hectares (Figure 3, Table 3). Including the area of land currently awaiting replanting after harvesting (47,700 hectares), makes the estimated total forest area 1.79 million hectares.

The 2020 net stocked forest area has been revised up from 1.665 to 1.717 million hectares due to new information including updated returns from respondents and amendments to historical data. Further details can be found in the NEFD online tables.

The area reported for 2021 was an increase of 23,396 hectares (1.4 percent) from the 2020 net stocked area of 1.717 million hectares. Year-on-year changes in the net stocked area can be caused by new information, updated returns from respondents, and changes in land use decisions by forest land owners.

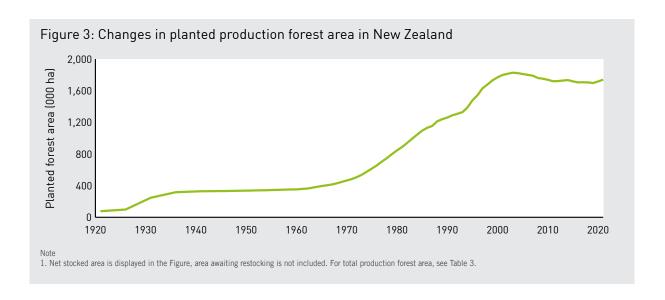


Table 3: Total Forest Area (hectares), as at 1 April

	2016	2017	2018	2019	2020r	2021
Area awaiting replanting	50,491	48,470	50,072	52,041	54,380	47,700
Net stocked area	1,704,746	1,706,429	1,704,494	1,696,604	1,716,575	1,739,971
Total forest area	1,755,238	1,754,899	1,754,566	1,748,645	1,770,955	1,787,671

The estimated known area of radiata pine increased by 26,472 hectares between 2020 and 2021. The increase was due to re-mapping of existing forestry (including from changes in ownership), fire damage, and the correction of anomalies in survey responses. Douglas-fir area decreased by 4,652 hectares between 2020 and 2021. Other hardwoods increased by 2,005 hectares between 2020 and 2021. Other softwoods and cypress species showed small decreases, while eucalypts showed minor increases, consistent with year-on-year variation.

Table 4: Forest area by annual age class as at 1 April 2021

Age	Area (ha)	Age	Area (ha)	Age	Area (ha)
1	51,712	28	60,632	55	493
2	52,824	29	45,173	56	447
3	43,668	30	14,394	57	755
4	42,522	31	13,070	58	192
5	41,416	32	11,310	59	329
6	42,494	33	7,285	60	231
7	43,471	34	7,649	61	526
8	47,732	35	10,128	62	164
9	59,058	36	11,564	63	155
10	54,665	37	8,976	64	154
11	41,371	38	7,110	65	119
12	35,236	39	5,368	66	64
13	34,417	40	5,221	67	137
14	35,390	41	5,293	68	101
15	33,308	42	3,784	69	112
16	38,109	43	4,402	70	31
17	47,081	44	2,760	71	376
18	56,574	45	2,017	72	310
19	58,919	46	2,184	73	55
20	64,843	47	1,889	74	52
21	65,740	48	1,092	75	17
22	66,485	49	957	76	18
23	73,088	50	714	77	62
24	84,419	51	1,155	78	9
25	99,021	52	867	79	17
26	86,901	53	622	80+	681
27	97,982	54	305		

Area Distribution by wood supply region



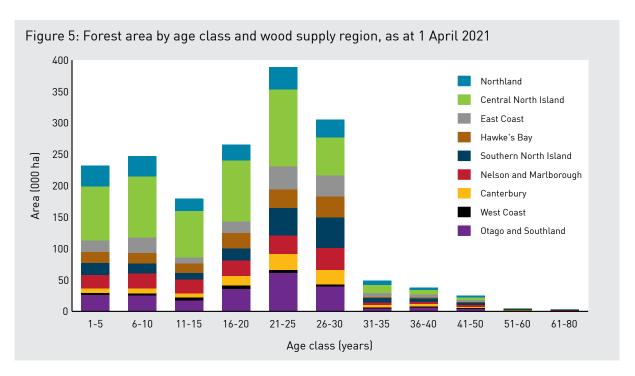
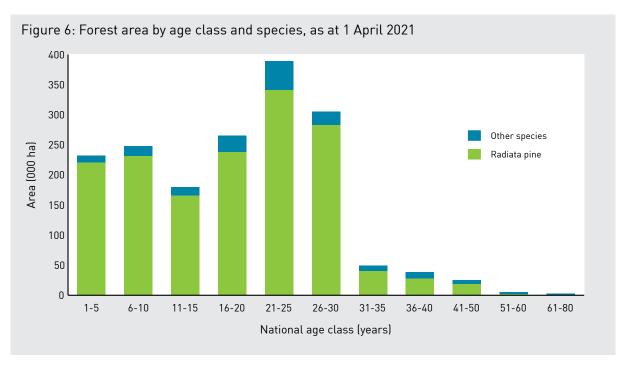


Figure 5 shows the distribution of forests across the nine wood supply regions in New Zealand by age class. The Central North Island has the largest area of forest across all age class groups. It accounts for around 37 percent (85,839 hectares) of the total forest in age class 1 to 5 years, and 32 percent (560,001 hectares) across all age classes.

## Species distribution by age classes



As seen in Figures 6 and 7, radiata pine is the dominant species, making up 90 percent of the planted production forest area in New Zealand. The proportion of douglas-fir is higher in Otago and Southland (25 percent) and Canterbury (17 percent) compared to the national distribution (6 percent) as growing conditions are more suitable.

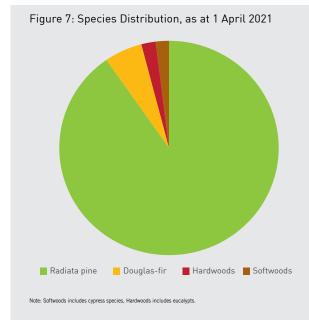


Figure 8: Radiata pine by Tending Regime, as at 1 April 2021

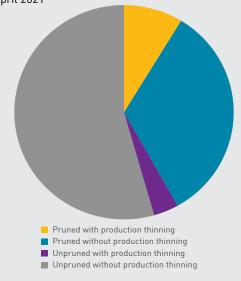
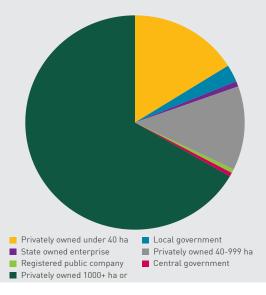


Figure 9: Forest ownership, as at 1 April 2021



#### Silviculture

Figure 8 indicates that about 42 percent (657,850 hectares) of the radiata pine planted forest estate is, or is expected to be, pruned to a height of at least four metres. This is a decrease from the previous year, and continuation of the general trend away from pruning.

The area of production forest that is, or is expected to be, thinned is unchanged from last year at 12.4 percent of the radiata pine planted forest (Figure 8). The proportion of production thinned forest is slightly higher in the North Island, with 13.2 percent (155,045 ha) production thinned, than in the South Island where 10.1 percent (39,975 ha) is production thinned. Generally, the area of production thinned forest has declined over the past decade. The area of forest that is unpruned with no production thinning now makes up 54.4 percent of the forest estate (855,602 ha), showing the trend towards minimally tended forests.

### Standing Volume

The standing volume by Territorial Authority at 1 April 2021 is presented in Table 5 (see Appendix 1 for a definition of standing volume).

#### Ownership

In 2021, there were around 1,800 owners with more than 40 hectares of forests. The vast majority (94 percent) owned between 40 and 999 hectares of forest, making up 14 percent of the National Forest Estate in 2021 (Table 6). In contrast, the 6 percent of owners with 1,000 or more hectares accounted for 70 percent of total exotic plantation forest estate in New Zealand.

The number of owners with fewer than 40 hectares is difficult to estimate, but is likely to be over 10,000. It is estimated these owners represent around 1 percent of total forest area. 1.7 million hectares, or 95 percent of New Zealand's exotic plantation forests, were privately owned as at 1 April 2021 (Figure 9).

- The area of forest owned or managed by major forest owners can be found in the New Zealand Forest Industry booklet, Facts & Figures 2020/21, page 13 (see the New Zealand Forest Owners Association website for more information).
- Ownership is based solely on the ownership of the forest irrespective of the ownership of the land.
- Figure represents percentage of net stocked planted production forest area by ownership type.
- Significant changes in forest ownership have occurred since 2003, resulting in large areas of forest previously owned by public companies now being privately owned.
   The legal entities included in the "Privately owned" category are
- The legal entities included in the "Privately owned" category are private companies, partnerships, individuals and trusts, which includes Maori trusts and incorporations.
- "Central Government" forests are predominantly Crown-owned forests on Maori lease-hold land. These forests are managed by Crown Forestry.

Table 5: Area, standing volume, and area-weighted average age by territorial authority as at 1 April 2021

T 0 1 1 1 2	Area (ha)	Standing volume (000 m³)	Area-weighted average age (years)
Territorial authority  Northland wood supply region	(IId)	(000 111-)	(years)
	96.659	10.406	16.0
Far North District	86,658	19,406	16.9
Whangarei District	31,309 38,128	6,843 7,747	16.5 15.2
Kaipara District  Auckland Council	37,929	11,239	20.5
Region total	194,024	45,235	17.2
Central North Island wood supply region	137,027	70,200	17.2
Thames-Coromandel District	23,601	7,308	17.0
Hauraki District	3,608	1,593	20.7
Waikato District			20.7
Matamata-Piako District	17,221 1,682	7,369 620	18.7
	1,082	8	
Hamilton City			25.4
Tauranga District	110	62	26.2
Western Bay of Plenty District	21,746	7,805	18.3
Rotorua District	52,344	15,881	16.6
Kawerau District	68	29	21.7
Whakatane District	110,895	29,789	15.1
Opotiki District	13,536	3,249	14.5
Waipa District	2,337	1,100	22.6
Otorohanga District	4,727	2,331	23.0
Waitomo District	25,712	11,063	21.1
Ruapehu District	52,079	18,764	18.2
South Waikato District	58,559	16,532	14.8
Taupo District	171,765	44,988	15.0
Region total	560,004	168,492	16.3
East Coast wood supply region			
Gisborne District	157,297	58,105	19.7
Region total	157,297	58,105	19.7
Hawkes Bay wood supply region			
Wairoa District	59,427	21,022	17.6
Hastings District	63,089	22,616	17.9
Napier City	25	16	31.0
Central Hawkes Bay District	17,018	8,472	22.7
Region total	139,559	52,126	18.4
Southern North Island wood supply region			
New Plymouth District	4,641	1,824	21.0
Stratford District	7,080	2,811	23.1
South Taranaki District	9,719	4,578	23.8
Wanganui District	22,927	9,839	22.3
Rangitikei District	21,599	9,466	22.7
Manawatu District	7,144	3,434	24.4
Kapiti Coast District	3,153	1,631	25.6
Upper Hutt City	4,849	1,979	22.0
Porirua City	1,214	732	29.3
Wellington City	581	298	25.2
Lower Hutt City	229	155	33.4
Palmerston North City	2,721	907	18.5
Tararua District	20,059	7,026	19.8
Masterton District	37,472	13,021	19.8
Horowhenua District	8,987	3,601	21.2
Carterton District	14,043	4,959	19.6
South Wairarapa District	9,834	3,697	20.8
Region total	176,252	69,958	21.4
North Island total	1,227,136	393,916	17.8

Territorial authority	Area (ha)	Standing volume (000 m <sup>3</sup> )	Area-weighted average age (years)
Nelson and Marlborough wood supply region			
Nelson City	8,686	2,445	17.3
Tasman District	83,627	23,994	17.7
Marlborough District	73,840	23,728	19.1
Kaikoura District	1,768	577	17.7
Region total	167,921	50,744	18.3
Canterbury wood supply region			
Hurunui District	35,636	10,025	20.7
Waimakariri District	8,371	3,037	23.0
Christchurch City	9,885	3,658	24.2
Selwyn District	10,140	3,078	21.2
Ashburton District	2,910	898	22.8
Timaru District	11,300	2,828	21.3
Mackenzie District	5,086	1,662	26.5
Waimate District	11,958	3,217	21.8
Region total	95,286	28,404	21.9
West Coast wood supply region			
Buller District	4,152	898	19.6
Grey District	13,488	2,699	17.7
Westland District	12,645	3,426	21.3
Region total	30,285	7,023	19.5
Otago and Southland wood supply region			
Waitaki District	22,752	5,120	18.7
Dunedin City	17,083	3,980	18.0
Queenstown-Lakes District	738	297	33.6
Central Otago District	6,393	1,721	24.7
Clutha District	86,819	20,209	19.2
Gore District	4,364	1,345	22.9
Southland District	80,438	18,439	19.3
Invercargill City	775	197	18.0
Region total	219,362	51,308	19.4
South Island total	512,854	137,479	19.5
New Zealand total	1,739,990	531,395	18.3

Table 6: Total area represented by each data source in the 2021 NEFD database

Data source	Net stocked area (000 ha)	Proportion of total area (%)	Number of owners at national level
Data collected in the NEFD survey			
10,000 hectares+	1,028	59%	29
1,000-9,999 hectares	190	11%	78
40-999 hectares	242	14%	1,643
NEFD Survey total <sup>1</sup>	1,459	84%	1,750
NEFD resource <40 hectares	11	1%	
New planting imputation (1992-2006) <sup>2</sup>	203	12%	
2004 AgriQuality small forest growers (<40 hectares) <sup>3</sup>	67	4%	
Total	1,740	100%	

- Notes
  1. Data collected from NEFD survey only.
  2. Adjustment made this year to the area of new forest planted between 1992 and 2006. New planting imputation is discussed in Appendix 5 (page 46).
  3. Small Forest Grower Survey Report, AgriQuality New Zealand, April 2005

Table 7: Number of forest owners by national size class, as at 1 April 2021<sup>1</sup>

Wood Supply Region	40-99 ha	100-499 ha	500-999 ha	1000-9999 ha	10,000+ ha
Northland	109	85	15	12	7
Central North Island	111	109	21	23	13
East Coast	39	42	7	13	9
Hawkes Bay	52	43	5	10	11
Southern North Island	197	162	20	13	9
Nelson and Marlborough	163	102	8	14	4
West Coast	6	4	1	1	2
Canterbury	69	77	5	10	4
Otago and Southland	133	81	13	13	11
New Zealand total <sup>2</sup>	871	685	87	78	29

Table 8: Forest area by forest owner national size class, as at 1 April 2021

Wood Supply Region	< 40 ha	40-99 ha	100-499 ha	500-999 ha	1000-9999 ha	10,000+ ha	Total ha
Northland	35,555	7,032	14,609	8,930	17,105	110,791	194,022
Central North Island	57,481	6,789	20,654	11,533	51,609	411,934	560,001
East Coast	16,881	2,265	9,947	5,244	34,687	88,270	157,295
Hawkes Bay	21,958	2,960	8,253	3,279	13,037	90,069	139,557
Southern North Island	45,092	12,124	31,824	10,031	20,627	56,550	176,250
Nelson and Marlborough	24,794	10,065	17,386	4,924	21,771	88,979	167,919
West Coast	2,751	381	612	617	345	25,579	30,285
Canterbury	32,615	4,343	12,851	2,899	8,830	33,739	95,278
Otago and Southland	43,424	8,474	15,841	7,631	22,114	121,876	219,360
New Zealand total	280,552	54,433	131,982	55,090	190,125	1,027,787	1,739,970



<sup>1.</sup> The Table shows the size class of the forest owner at a national level and the regions where the owner has forests located. This does not show the size of the forest at regional level.

<sup>2.</sup> The New Zealand totals do not equal the sum of the wood supply regions because some owners have forests in more than one region. This is particularly the case for owners in the 1,000-9,000 hectare and 10,000+ hectare size classes.

## Harvesting

#### An estimate of total harvest volumes Deforestation Intentions Survey for New Zealand

Along with NEFD harvest figures produced, the Ministry for Primary Industries also publishes Forestry Production Statistics (FPS) quarterly and annually on the Te Uru Rākau website. These statistics, obtained from New Zealand wood processors, report on production and stock levels of various wood products and total roundwood removal. Note, in this report the total volume harvested is based on the FPS Roundwood data. This is due to the NEFD figures only representing forests larger than 40 hectares and hence is not representative of the national harvesting trends.

The estimated total harvest volume for the year ended 31 March 2021 was 34.4 million cubic metres, a 0.2 percent decrease on the previous year. The majority of this harvest volume came from radiata pine (93.6 percent), followed by Douglas-fir (4.1 percent). Other exotic species made up the remaining 2.3 percent.

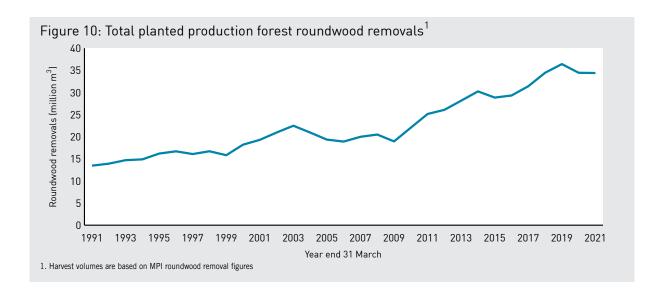
Radiata pine is typically harvested when it is between 26 and 32 years old. The area-weighted average clear fell age of radiata pine has decreased from 29.1 years in 2020 to 28.5 years in the year ended 31 March 2021.

Of the radiata pine harvest, the proportion of recovered volume sold as pulp and chip logs has increased to 19 percent, from 18 percent in 2020. Approximately 10 percent of harvest was sold as pruned logs, a 1 percentage point decrease from last year.

The Deforestation Intention Survey is commissioned by MPI to provide information on future rates of deforestation of planted production forest. The work is needed to assist with projecting New Zealand's likely greenhouse gas emissions over the second commitment period of the Kyoto Protocol and beyond under New Zealand's Paris agreement commitments. This information is also needed to inform future policy development. The latest report can be found on the Te Uru Rākau website: https://www.teururakau.govt. nz/news-and-resources/open-data-and-forecasting/forestry/ new-zealands-forests/

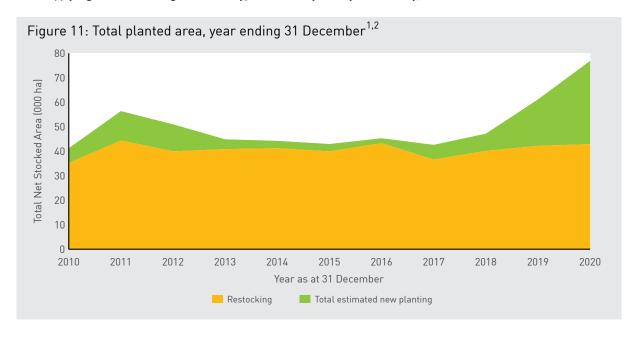
#### Wood Availability Forecasts

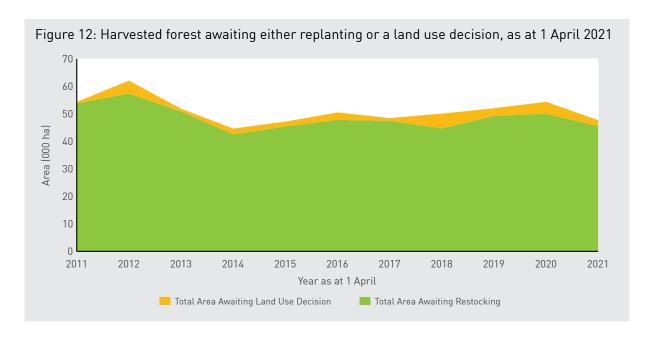
Regional and national wood availability forecasts are prepared by the industry and MPI under the NEFD work programme. They apply a range of harvesting scenarios and other factors that show potential volumes of logs that may be harvested by large and small-scale forest owners over the next 30 years. These forecasts are available on the Te Uru Rākau website: https://www.teururakau.govt. nz/news-and-resources/open-data-and-forecasting/forestry/ new-zealands-forests/



## Planting

We estimate 77,000 ha of total planting occurred during the year to December 2020, an increase on previous years. Approximately 45,487 hectares of previously harvested forest was awaiting either replanting or a land use decision as at 1 April 2021 (Figure 12). This is a decrease of around 4,500 hectares on the previous year. The largest increase was for the Nelson and Marlborough wood supply region. The other regions showed typical levels of year-on-year variability, both increases and decreases.





#### New planting

New planting to December 2020 is estimated at 34,000 hectares, based on a survey of large forest owners and the amount established by smaller forest owners under Te Uru Rākau forestry schemes (Figure 13).

The land cover prior to new planting is presented in Table 9. Due to the small area of new planting in recent years and the influence of a small number of forest owners undertaking new planting, proportions of land cover types prior to planting may differ markedly between years and are not necessarily indicative of future trends.

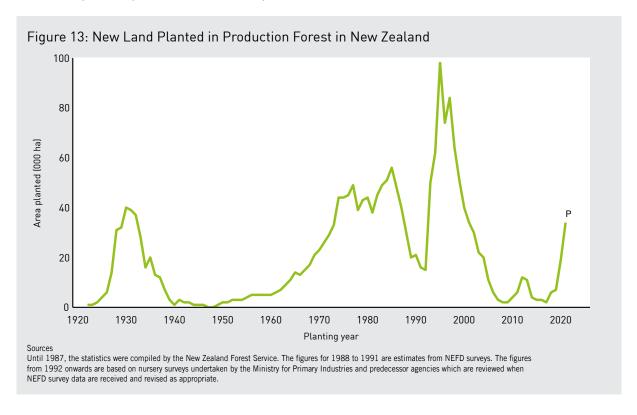


Table 9: Land cover prior to new planting, year ending December

	Improved	Unimproved	Other woody	Area of new
Calendar years	pasture1 (%)	pasture <sup>2</sup> (%)	vegetation3 (%)	planting (ha)
1994	49	35	16	98,000
1995	67	22	11	74,000
1996	36	50	14	84,000
1997	43	46	11	64,000
1998	44	47	9	51,000
1999	56	30	14	40,000
2000	52	31	17	34,000
2001	68	9	23	30,000
2002	31	49	19	22,000
2003	28	46	26	20,000
2004	18	46	37	11,000
2005	2	19	79	6,000
2006	2	35	62	3,000
2007	11	9	80	2,000
2008	57	2	41	2,000
2009	27	58	15	4,000
2010	64	29	6	6,000
2011	42	53	5	12,000
2012	61	32	7	11,000
2013	33	43	24	4,000
2014	13	79	8	3,000
2015	30	43	27	3,000
2016	1	63	36	2,000
2017	53	40	7	6,000
2018	60	20	19	7,000
2019	37	43	20	19,000
2020	44	54	2	34,000

<sup>1.</sup> Improved pasture - land that has been fertilised and contains improved pasture species.
2. Unimproved pasture - land not fertilised, with no improved pasture species sown.
3. Woody vegetation - land predominantly covered in bracken gorse, mānuka, kānuka, or other woody species.

Nursery Survey
Along with planting information gathered in the NEFD, MPI also runs the annual 'Nursery Survey'. This report surveys commercial forest nurseries for tree stock sales information. It provides provisional estimates of tree stock sales and areas of commercial forest planted annually.

This report is published on Te Uru Rākau's website: https://www.teururakau.govt.nz/news-and-resources/ open-data-and-forecasting/forestry/new-zealands-forests/





Table 10: Area planted in all species by territorial authority, as at 1 April 2021

						ll species class (years)						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region												
Far North District	14,774	17,078	10,869	10,773	12,199	10,860	5,547	3,000	1,444	74	40	86,658
Whangarei District	5,660	6,291	2,870	3,506	6,069	5,314	622	332	488	134	23	31,309
Kaipara District	10,256	6,911	2,358	3,576	7,390	5,581	1,253	454	280	38	31	38,128
Auckland Council	2,824	2,604	4,230	8,212	10,247	7,142	470	720	1,354	96	29	37,928
Region total	33,514	32,884	20,327	26,067	35,905	28,896	7,892	4,506	3,566	342	123	194,023
Central North Island wood supply re	egion											
Thames-Coromandel District	2,455	4,457	5,039	4,240	3,122	2,272	178	1,153	571	55	59	23,601
Hauraki District	499	290	С	256	1,063	1,262	37	26	31	8	6	С
Waikato District	1,589	1,122	1,385	2,802	5,305	4,070	532	220	115	15	65	17,220
Matamata-Piako District	284	103	352	192	160	416	55	38	79	0	3	1,682
Hamilton City	2	0	0	0	3	8	0	1	0	0	0	14
Tauranga District	0	0	0	12	36	39	17	6	0	0	0	110
Western Bay of Plenty District	3,032	2,499	2,540	3,984	4,131	4,564	329	279	296	2	89	21,745
Rotorua District	7,623	8,373	7,088	10,697	10,952	4,990	1,169	441	722	97	192	52,344
Kawerau District	0	0	8	10	44	6	0	0	0	0	0	68
Whakatane District	19,526	19,728	18,586	15,683	25,366	8,991	1,575	840	494	40	66	110,895
Opotiki District	2,219	5,098	1,253	1,371	1,236	726	982	543	108	0	0	13,536
Waipa District	103	167	68	230	924	677	73	51	41	0	3	2,337
Otorohanga District	99	215	10	1,278	1,104	1,665	193	114	43	4	2	4,727
Waitomo District	975	530	4,623	4,371	6,948	7,188	521	368	157	21	9	25,712
Ruapehu District	6,341	11,327	2,486	4,532	16,915	6,733	2,297	1,060	333	28	27	52,079
South Waikato District	11,650	8,230	7,408	13,450	13,954	3,535	61	97	21	32	121	58,559
Taupo District	29,442	35,560	22,869	33,264	31,189	12,680	4,298	1,579	431	364	89	171,765
Region total	85,839	97,699	C	96,372	122,452	59,821	12,317	6,816	3,442	666	731	C
East Coast wood supply region												
Gisborne District	18,013	24,687	10,017	18,571	36,377	34,146	6,637	5,014	3,154	614	66	157,295
Region total	18,013	24,687	10,017	18,571	36,377	34,146	6,637	5,014	3,154	614	66	157,295
Hawke's Bay wood supply region												
Wairoa District	9,017	7,380	6,011	10,355	11,180	14,733	88	225	269	116	53	59,427
Hastings District	7,788	7,775	7,440	12,493	12,782	12,956	664	614	474	54	47	63,088
Napier City	0	0	0	0	6	7	0	12	0	0	0	25
Central Hawkes Bay District	1,323	767	914	1,427	5,982	5,039	494	532	412	47	81	17,018
Region total	18,128	15,922	14,365	24,275	29,950	32,735	1,246	1,383	1,155	217	181	139,558
Southern North Island wood supply												
New Plymouth District	С	197	290	630	1,139	1,237	260	150	105	4	0	С
Stratford District	833	891	312	542	601	2,958	144	225	50	315	209	7,080
South Taranaki District	621	364	542	1,026	2,585	3,270	591	312	377	20	С	С
Wanganui District	1,202	1,892	1,404	2,941	5,546	7,768	1,691	215	154	34	80	22,927
Rangitikei District	1,100	1,596	595	2,471	8,741	5,491	438	358	498	248	63	21,599
Manawatu District	349	641	90	883	1,093	2,958	392	380	324	17	17	7,144
Kapiti Coast District	43	139	90	356	662	1,205	407	200	51	0	0	3,153
Upper Hutt City	300	525	595	796	875	850	314	359	144	45	46	4,849
Porirua City	3	10	48	129	34	691	41	138	117	3	0	1,214
Wellington City	7	0	68	36	76	308	70	14	2	0	0	581
Lower Hutt City	0	0	0	10	52	50	5	53	59	0	0	229
Palmerston North City	С	382	519	242	199	671	С	26	191	0	0	2,721
Tararua District	2,370	3,679	1,168	1,747	4,629	4,244	712	923	517	53	17	20,059
Masterton District	7,147	2,846	2,445	3,795	7,837	10,058	1,082	1,330	600	284	46	37,470
Horowhenua District	933	530	1,173	1,616	1,015	2,682	358	351	203	С	67	С
Carterton District	1,495	1,204	1,131	1,154	6,379	2,094	186	124	178	98	0	14,043
South Wairarapa District	1,164	1,240	271	1,345	2,333	2,376	514	226	336	22	7	9,834
Region total	18,596	16,136	10,741	19,719	43,796	48,911	С	5,384	3,906	C	C	176,250
North Island total	174,090	187,328	129,296	185,004	268,481	204,510	35,388	23,103	15,223	3,041	1,664	1,227,127

					L	ıll species						
					Age	class (years	s)					
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood supp	ly region											
Nelson City	862	1,234	2,077	1,525	1,345	1,127	37	344	79	27	29	8,686
Tasman District	10,742	10,660	13,863	14,902	14,809	13,291	1,746	1,703	1,559	234	118	83,626
Marlborough District	9,124	12,456	6,060	7,925	13,022	19,717	2,240	1,824	1,245	181	46	73,839
Kaikoura District	С	59	0	96	434	393	17	23	87	32	2	С
Region total	С	24,409	22,000	24,448	29,610	34,528	4,040	3,894	2,970	474	195	С
West Coast wood supply region												
Buller District	676	878	440	285	405	522	79	306	537	5	19	4,152
Grey District	2,610	1,380	2,203	2,656	2,166	1,012	С	421	500	397	43	С
Westland District	682	844	2,387	2,442	2,564	1,759	625	693	507	41	101	12,645
Region total	3,968	3,102	5,030	5,383	5,135	3,293	C	1,420	1,544	443	163	С
Canterbury wood supply region												
Hurunui District	2,352	2,853	3,155	7,700	9,723	6,641	1,106	1,191	605	226	81	35,632
Waimakariri District	377	694	574	961	1,749	3,327	327	174	106	40	39	8,368
Christchurch City	542	545	277	941	2,045	4,400	464	406	211	11	42	9,884
Selwyn District	1,692	912	499	695	2,110	2,551	775	517	230	134	С	С
Ashburton District	126	349	301	347	669	615	183	136	92	36	56	2,910
Timaru District	983	694	544	3,010	2,446	2,105	1,062	198	157	54	47	11,300
Mackenzie District	159	140	310	560	875	2,026	174	360	217	107	158	5,086
Waimate District	840	1,042	674	1,068	5,241	1,998	398	490	120	47	40	11,957
Region total	7,071	7,229	6,334	15,282	24,858	23,663	4,489	3,472	1,738	655	C	С
Otago and Southland wood supply re	egion											
Waitaki District	3,506	3,057	854	3,069	7,738	3,170	326	592	343	С	37	С
Dunedin City	2,566	4,661	1,292	851	1,688	3,837	724	1,004	376	С	70	С
Queenstown-Lakes District	0	0	3	27	71	180	189	123	С	9	27	С
Central Otago District	С	368	137	413	2,550	1,639	189	338	191	243	65	С
Clutha District	10,820	8,516	8,159	14,978	22,495	16,032	1,831	2,118	1,224	233	413	86,819
Gore District	338	0	119	182	2,197	1,278	118	26	52	49	5	4,364
Southland District	8,077	8,530	6,434	15,849	23,830	12,793	1,283	2,132	1,308	169	33	80,438
Invercargill City	94	221	64	40	100	159	61	17	13	6	0	775
Region total	C	25,353	17,062	35,409	60,669	39,088	4,720	6,350	C	783	650	219,361
South Island total	58,052	60,093	50,426	80,522	120,272	100,572	14,053	15,136	9,868	2,355	1,496	512,844
New Zealand total	232,142	247,421	179,722	265,526	388,753	305,082	49,441	38,239	25,091	5,396	3,160	1,739,971

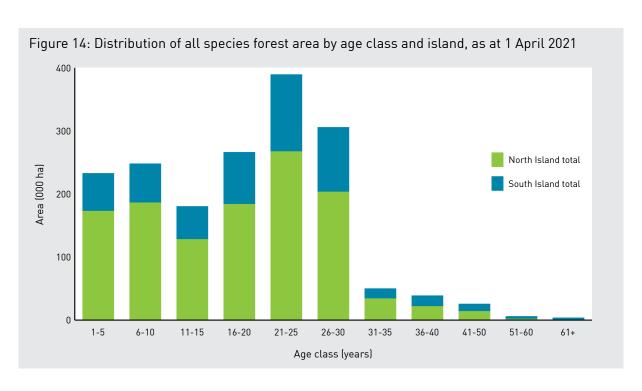


Table 11: Area planted in radiata pine by territorial authority, as at 1 April 2021

						adiata pine						
	1.5	/ 10	11 15	47.00		class (years		27.70	(4.50	F1 (0	/1	
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region												
Far North District	14,582	17,053	10,862	10,338	11,840	10,570	5,483	2,774	1,293	27	1	84,823
Whangarei District	5,566	6,289	2,870	3,473	5,803	5,045	599	309	409	123	3	30,489
Kaipara District	10,204	6,906	2,357	3,469	7,102	5,457	1,200	434	252	28	12	37,421
Auckland Council	2,813	2,594	4,173	8,059	9,947	6,812	389	638	1,259	85	10	36,779
Region total	33,165	32,842	20,262	25,339	34,692	27,884	7,671	4,155	3,213	263	26	189,512
Central North Island wood supply re												
Thames-Coromandel District	2,455	4,455	5,039	4,231	3,112	2,211	174	1,091	505	52	25	23,350
Hauraki District	497	С	С	239	1,029	1,255	36	23	31	0	0	3,435
Waikato District	1,577	1,122	1,375	2,694	5,264	4,008	498	201	113	15	57	16,924
Matamata-Piako District	284	102	352	176	140	397	53	36	79	0	0	1,619
Hamilton City	2	0	0	0	3	8	0	1	0	0	0	14
Tauranga District	0	0	0	10	28	38	16	5	0	0	0	97
Western Bay of Plenty District	3,015	2,481	2,504	3,816	3,810	4,423	286	193	268	2	0	20,798
Rotorua District	7,489	8,244	7,045	10,448	9,974	4,584	678	114	246	19	15	48,856
Kawerau District	0	0	8	10	10	6	0	0	0	0	0	34
Whakatane District	19,434	19,713	18,540	15,239	23,759	8,055	134	186	359	13	9	105,441
Opotiki District	2,218	5,092	1,250	1,360	1,226	720	974	543	108	0	0	13,491
Waipa District	92	167	68	177	744	642	69	48	31	0	2	2,040
Otorohanga District	97	215	10	1,207	1,052	1,604	145	90	43	0	0	4,463
Waitomo District	975	474	3,230	4,225	6,740	6,920	515	284	92	0	0	23,456
Ruapehu District	5,732	10,505	2,448	4,341	16,504	6,570	2,292	1,041	224	1	0	49,658
South Waikato District	11,237	6,181	6,996	12,938	13,763	3,486	22	91	С	26	76	С
Taupo District	28,603	34,507	21,873	31,752	30,009	11,328	3,424	793	136	63	56	162,544
Region total	83,707	С	C	92,863	117,168	56,254	9,316	4,740	C	191	240	C
East Coast wood supply region												
Gisborne District	17,698	23,623	9,402	18,205	35,725	33,720	6,503	4,891	2,899	32	24	152,722
Region total	17,698	23,623	9,402	18,205	35,725	33,720	6,503	4,891	2,899	32	24	152,722
Hawke's Bay wood supply region												
Wairoa District	8,235	7,005	5,939	9,924	11,134	14,675	81	219	243	15	4	57,474
Hastings District	7,634	7,571	7,115	12,430	12,630	12,760	628	510	401	38	24	61,741
Napier City	0	0	0	0	6	1	0	8	0	0	0	15
Central Hawkes Bay District	972	764	693	1,386	5,905	4,977	473	461	394	41	16	16,082
Region total	16,841	15,340	13,747	23,740	29,675	32,412	1,182	1,198	1,038	94	44	135,312
Southern North Island wood supply												
New Plymouth District	С	137	161	486	789	1,198	248	140	101	1	0	С
Stratford District	732	420	305	524	588	2,898	143	174	33	0	1	5,818
South Taranaki District	596	348	231	989	2,531	3,219	579	309	375	20	С	С
Wanganui District	1,109	1,884	1,392	2,719	5,438	7,673	1,679	189	146	33	73	22,335
Rangitikei District	1,078	1,110	485	2,169	8,470	5,377	374	329	433	183	5	20,013
Manawatu District	306	627	89	831	1,029	2,901	363	330	299	17	5	6,797
Kapiti Coast District	43	139	90	346	639	1,177	405	200	50	0	0	3,089
Upper Hutt City	300	525	595	792	864	838	298	291	140	30	35	4,708
Porirua City	3	10	48	129	34	684	40	137	117	3	0	1,205
Wellington City	7	0	68	36	76	308	70	14	2	0	0	581
Lower Hutt City	0	0	0	10	50	50	3	53	59	0	0	225
Palmerston North City	С	308	519	229	195	618	С	26	191	0	0	2,575
Tararua District	2,369	3,392	1,168	1,718	4,580	4,228	703	654	490	50	15	19,367
Masterton District	7,119	2,777	2,413	3,715	7,738	9,978	1,053	1,273	576	147	18	36,807
Horowhenua District	933	526	1,160	1,610	992	2,604	344	331	196	С	50	С
Carterton District	1,439	1,204	1,131	1,148	6,328	2,075	175	118	158	55	0	13,831
South Wairarapa District	1,158	1,235	271	1,334	2,310	2,341	451	220	201	22	2	9,545
Region total	18,221	14,642	10,126	18,785	42,651	48,167	C	4,788	3,567	С	C	168,784

					R	adiata pine						
					Age	class (years	s)					
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood supp	oly region					· ·	•					
Nelson City	862	1,233	2,067	1,517	1,302	1,092	32	109	27	0	0	8,241
Tasman District	10,654	10,653	13,681	14,503	13,604	11,450	731	927	663	133	19	77,018
Marlborough District	9,096	12,172	5,933	7,658	12,398	19,389	2,082	1,544	1,097	136	28	71,533
Kaikoura District	С	47	0	88	409	391	15	22	60	0	2	С
Region total	C	24,105	21,681	23,766	27,713	32,322	2,860	2,602	1,847	269	49	С
West Coast wood supply region												
Buller District	661	743	260	167	260	484	60	61	98	4	0	2,798
Grey District	2,519	1,297	1,899	2,395	1,991	982	52	247	219	141	0	11,742
Westland District	639	844	1,395	1,049	986	649	58	43	440	21	1	6,125
Region total	3,819	2,884	3,554	3,611	3,237	2,115	170	351	757	166	1	20,665
Canterbury wood supply region												
Hurunui District	1,919	2,296	2,240	5,804	8,465	6,021	888	534	480	67	17	28,730
Waimakariri District	262	646	553	924	1,672	3,089	284	164	54	40	38	7,726
Christchurch City	542	538	276	647	1,662	2,777	371	346	168	6	24	7,358
Selwyn District	1,468	900	499	636	1,670	1,876	422	397	198	С	1	С
Ashburton District	123	338	294	291	476	495	76	88	53	36	20	2,290
Timaru District	936	392	253	480	1,221	1,899	825	177	67	25	0	6,275
Mackenzie District	127	48	161	171	345	1,116	79	108	111	39	2	2,307
Waimate District	831	985	646	674	2,872	1,235	326	266	56	18	26	7,935
Region total	6,208	6,143	4,922	9,627	18,383	18,508	3,271	2,080	1,187	С	128	С
Otago and Southland wood supply r	egion											
Waitaki District	3,488	2,907	664	2,840	3,998	2,913	269	448	249	С	20	С
Dunedin City	2,474	4,567	1,237	747	1,445	3,566	510	361	82	С	13	С
Queenstown-Lakes District	0	0	0	10	18	С	23	36	С	4	27	240
Central Otago District	С	0	С	150	244	990	62	223	118	9	52	1,909
Clutha District	8,593	5,687	5,531	10,787	14,350	14,197	875	626	578	47	188	61,459
Gore District	64	0	17	149	872	1,077	73	26	49	37	1	2,365
Southland District	5,475	4,857	4,234	7,782	10,654	9,085	655	1,075	808	111	16	44,752
Invercargill City	94	221	64	40	100	156	61	17	13	6	0	772
Region total	С	18,239	C	22,505	31,681	C	2,528	2,812	C	272	317	144,353
South Island total	51,501	51,371	41,915	59,509	81,014	84,971	8,830	7,845	5,768	979	495	394,197
New Zealand total	221,133	231,362	166,229	238,441	340,925	283,409	40,519	27,617	18,732	2,167	1,041	1,571,574

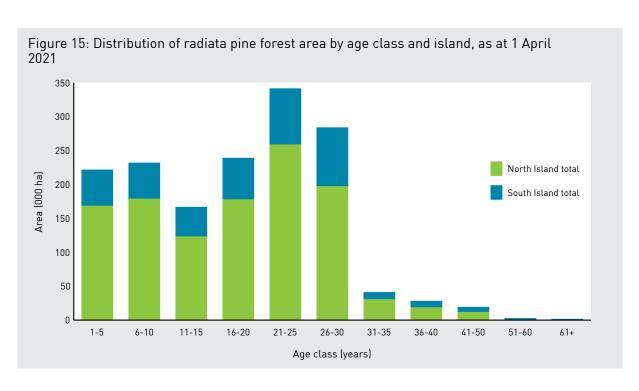


Table 12: Area planted in Douglas-fir by territorial authority, as at 1 April 2021

						ouglas-fir						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)	(IId)
Far North District	0	0	0	0	0	2	0	0	2	0	0	4
Whangarei District	0	0	0	0	0	0	0	0	0	0	0	0
Kaipara District	0	0	0	0	0	0	0	0	0	0	0	0
Auckland Council	0	6	0	0	0	0	0	0	0	0	0	6
Region total	0	6	0	0	0	2	0	0	2	0	0	10
Central North Island wood supply re	egion											
Thames-Coromandel District	0	0	0	0	0	10	0	0	0	0	0	10
Hauraki District	0	0	8	0	0	0	0	0	0	0	0	8
Waikato District	0	0	0	0	0	1	0	1	0	0	0	2
Matamata-Piako District	0	0	0	1	3	0	0	0	0	0	0	4
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	0	0	0	4	С	5	0	2	10	0	2	С
Rotorua District	0	0	0	36	526	240	423	130	413	50	121	1,939
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	0	17	207	1,340	795	1,394	597	21	22	27	4,420
Opotiki District	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	0	0	0	0	2	1	0	0	0	0	0	3
Otorohanga District	0	0	0	54	37	22	1	0	0	1	0	115
Waitomo District	0	0	1,392	128	154	190	0	2	50	9	0	1,925
Ruapehu District	147	352	0	147	183	45	0	3	32	15	1	925
South Waikato District	24	0	217	216	11	4	0	0	4	0	7	483
Taupo District	84	55	168	1,301	751	997	799	732	243	56	6	5,192
Region total	255	407	1,802	2,094	С	2,310	2,617	1,467	773	153	164	С
East Coast wood supply region												
Gisborne District	0	331	330	235	503	С	0	1	4	382	0	С
Region total	0	331	330	235	503	С	0	1	4	382	0	C
Hawke's Bay wood supply region												
Wairoa District	61	44	0	40	0	1	0	0	1	72	15	234
Hastings District	0	1	0	13	20	112	0	С	25	8	7	С
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	0	0	0	5	7	23	1	0	1	3	9	49
Region total	61	45	0	58	27	136	1	C	27	83	31	C
Southern North Island wood supply	region											
New Plymouth District	0	0	0	0	0	0	0	0	0	0	0	0
Stratford District	0	0	0	1	1	0	0	0	1	262	186	451
South Taranaki District	0	0	0	0	0	0	0	1	0	0	0	1
Wanganui District	0	0	8	4	11	10	6	12	2	0	0	53
Rangitikei District	0	150	1	10	50	50	0	1	9	5	7	283
Manawatu District	0	0	0	2	5	0	6	4	3	0	0	20
Kapiti Coast District	0	0	0	1	2	0	0	0	0	0	0	3
Upper Hutt City	0	0	0	3	7	1	4	0	2	1	2	20
Porirua City	0	0	0	0	0	0	0	0	0	0	0	0
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	23	0	0	0	0	0	0	0	0	0	23
Tararua District	0	0	0	6	17	0	0	1	11	0	0	35
Masterton District	0	2	1	6	10	4	0	0	1	90	14	128
Horowhenua District	0	0	0	0	0	0	1	0	0	12	0	13
Carterton District	13	0	0	2	36	1	0	0	0	0	0	52
South Wairarapa District	5	0	0	0	0	0	0	1	0	0	0	6
	~	-							Ŭ			3
Region total	18	175	10	35	139	66	17	20	29	370	209	1,088

						ouglas-fir						
	1-5	6-10	11-15	16-20	21-25	class (years 26-30	31-35	36-40	41-50	51-60	61+	
	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Years (ha)	Year (ha)	Total (ha)
Nelson and Marlborough wood sup	ply region											
Nelson City	0	0	10	4	33	24	1	196	32	21	9	330
Tasman District	11	0	112	238	1,012	1,511	942	523	408	49	28	4,834
Marlborough District	0	166	32	62	431	140	88	215	50	27	6	1,217
Kaikoura District	0	12	0	0	18	2	0	1	22	31	0	86
Region total	11	178	154	304	1,494	1,677	1,031	935	512	128	43	6,467
West Coast wood supply region												
Buller District	0	135	180	110	134	8	2	5	40	0	1	615
Grey District	36	83	189	128	149	0	0	30	68	201	1	885
Westland District	0	0	0	0	10	2	0	13	0	11	0	36
Region total	36	218	369	238	293	10	2	48	108	212	2	1,536
Canterbury wood supply region												
Hurunui District	318	547	317	1,293	1,185	538	206	357	34	4	7	4,806
Waimakariri District	27	40	0	37	39	21	6	7	37	0	0	214
Christchurch City	0	0	0	3	96	36	29	14	26	3	0	207
Selwyn District	36	12	0	44	316	447	301	108	23	93	21	1,401
Ashburton District	0	10	6	36	117	79	42	27	39	0	2	358
Timaru District	47	302	246	2,501	959	48	85	12	87	19	29	4,335
Mackenzie District	20	81	125	375	466	288	74	79	85	С	2	С
Waimate District	0	46	13	318	2,181	673	35	105	14	17	13	3,415
Region total	448	1,038	707	4,607	5,359	2,130	778	709	345	C	74	C
Otago and Southland wood supply	region											
Waitaki District	0	21	92	197	3,586	103	4	83	70	С	0	С
Dunedin City	1	22	39	82	222	93	95	605	260	5	11	1,435
Queenstown-Lakes District	0	0	0	12	52	116	153	87	С	2	0	С
Central Otago District	С	С	С	206	2,066	90	21	33	28	4	0	2,613
Clutha District	1,286	2,528	2,126	3,370	7,128	1,462	796	1,190	517	167	162	20,732
Gore District	0	0	1	27	1,206	57	4	0	3	12	4	1,314
Southland District	426	1,381	987	6,562	10,468	2,699	206	881	245	49	1	23,905
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	C	C	C	10,456	24,728	4,620	1,280	2,879	C	C	178	54,610
South Island total	2,248	5,493	4,493	15,605	31,874	8,437	3,090	4,571	2,117	722	297	78,947
New Zealand total	2,582	6,457	6,636	18,027	35,557	11,151	5,725	6,086	2,952	1,710	701	97,584

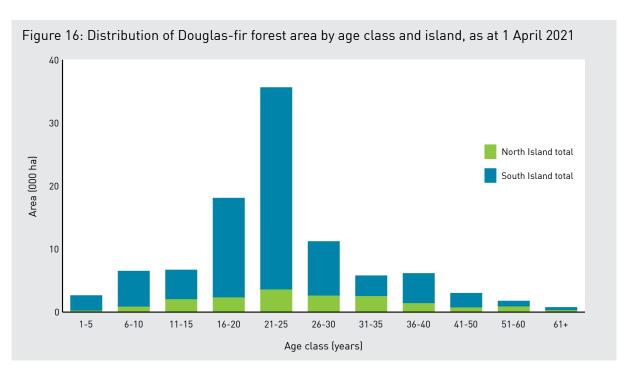


Table 13: Area planted in cypress species by territorial authority, as at 1 April 2021

						ess species class (years)						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region												
Far North District	0	3	2	29	49	61	0	3	21	0	0	168
Whangarei District	0	0	0	0	18	17	0	0	2	0	0	37
Kaipara District	0	0	0	41	0	3	0	0	1	0	0	45
Auckland Council	0	3	15	51	31	113	16	4	4	1	0	238
Region total	0	6	17	121	98	194	16	7	28	1	0	488
Central North Island wood supply reg												
Thames-Coromandel District	0	0	0	0	2	0	0	3	0	0	0	5
Hauraki District	0	0	20	0	0	0	1	2	0	0	0	23
Waikato District	7	0	0	0	1	0	1	6	1	0	0	16
Matamata-Piako District	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	20	0	0	0	101
Western Bay of Plenty District	14	27	15 0	42 136	22	2 8	9	41	0	0	1	101 237
Rotorua District  Kawerau District	0	0	0	130	0	0	0	0	0	0	0	237
Whakatane District	8	0	29	74	69	2	1	36	0	0	0	219
Opotiki District	0	2	0	0	09	0	0	0	0	0	0	219
Waipa District	0	0	0	0	0	3	0	0	0	0	0	3
Otorohanga District	0	0	0	0	0	0	4	0	0	0	0	4
Waitomo District	0	0	0	0	0	1	0	0	0	0	0	1
Ruapehu District	1	5	0	13	0	0	0	1	0	0	12	32
South Waikato District	0	7	2	0	0	10	9	0	0	0	0	28
Taupo District	22	14	276	64	54	13	0	2	0	0	0	445
Region total	52	55	342	329	149	39	25	111	1	0	13	1,116
East Coast wood supply region												.,
Gisborne District	16	26	39	19	45	41	10	24	29	29	4	282
Region total	16	26	39	19	45	41	10	24	29	29	4	282
Hawke's Bay wood supply region												
Wairoa District	0	0	0	С	С	39	0	0	0	0	13	219
Hastings District	0	14	84	19	41	7	0	1	0	0	0	166
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	1	0	0	3	С	0	0	1	1	0	0	С
Region total	1	14	84	С	74	46	0	2	1	0	13	С
Southern North Island wood supply r												
New Plymouth District	0	0	0	0	0	0	0	3	0	0	0	3
Stratford District	0	47	1	0	0	4	0	36	6	15	3	112
South Taranaki District	0	0	0	5	0	0	0	0	0	0	0	5
Wanganui District	0	8	0	95	22	0	0	0	С	0	0	С
Rangitikei District	0	3	4	21	13	1	8	14	43	47	0	154
Manawatu District	4	0	0	0	10	5	7	9	3	0	1	39
Kapiti Coast District	0	0	0	0	1	0	0	0	0	0	0	1
Upper Hutt City	0	0	0	0	1	1	2	50	0	0	0	54
Porirua City	0	0	0	0	0	1	0	0	0	0	0	1
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City Palmerston North City	0	27	0	0	0	0	0	0	0	0	0	27
Tararua District	0	0	0	0	0	0	0	0	0	0	0	0
Masterton District	0	0	5	3	17	11	0	3	0	0	0	39
Horowhenua District	0	0	6	0	6	0	0	0	C	0	1	C
Carterton District	0	0	0	2	0	0	0	0	0	0	0	2
South Wairarapa District	0	0	0	2	4	0	1	0	2	0	0	9
Region total	4	85	16	128	74	23	18	115	60	62	5	590

						ress specie						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood sup	ply region								· ·	•		
Nelson City	0	1	0	4	9	5	0	0	0	0	7	26
Tasman District	6	4	10	13	38	75	1	0	1	0	9	157
Marlborough District	0	С	16	52	61	22	2	7	0	0	5	С
Kaikoura District	0	0	0	8	0	0	0	0	1	1	0	10
Region total	6	C	26	77	108	102	3	7	2	1	21	С
West Coast wood supply region												
Buller District	0	0	0	0	1	0	8	11	0	0	6	26
Grey District	0	0	40	102	21	17	23	85	11	0	12	311
Westland District	0	0	786	1,229	1,271	472	68	256	18	0	7	4,107
Region total	0	0	826	1,331	1,293	489	99	352	29	0	25	4,444
Canterbury wood supply region												
Hurunui District	0	1	59	32	3	7	1	0	0	0	9	112
Waimakariri District	0	0	0	0	8	0	5	0	0	0	0	13
Christchurch City	0	0	0	0	21	135	0	3	0	0	0	159
Selwyn District	0	0	0	0	С	7	0	0	0	0	0	С
Ashburton District	1	0	0	2	0	6	0	0	0	0	0	9
Timaru District	0	0	0	13	9	12	0	5	0	0	0	39
Mackenzie District	0	0	0	4	0	22	0	0	0	0	0	26
Waimate District	0	0	0	14	9	9	19	0	0	0	0	51
Region total	1	1	59	65	C	198	25	8	0	0	9	С
Otago and Southland wood supply	region											
Waitaki District	0	16	5	6	25	6	14	0	0	0	5	77
Dunedin City	0	0	12	16	11	58	61	0	0	0	0	158
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	С	0	0	0	4	0	0	0	0	0	С
Clutha District	28	72	76	567	247	94	53	15	51	0	5	1,208
Gore District	0	0	0	0	14	0	0	0	0	0	0	14
Southland District	8	61	55	62	92	12	10	67	2	0	0	369
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	36	С	148	651	389	174	138	82	53	0	10	С
South Island total	43	175	1,059	2,124	1,862	963	265	449	84	1	65	7,090
New Zealand total	116	361	1,557	2,890	2,302	1,306	334	708	203	93	100	9,970

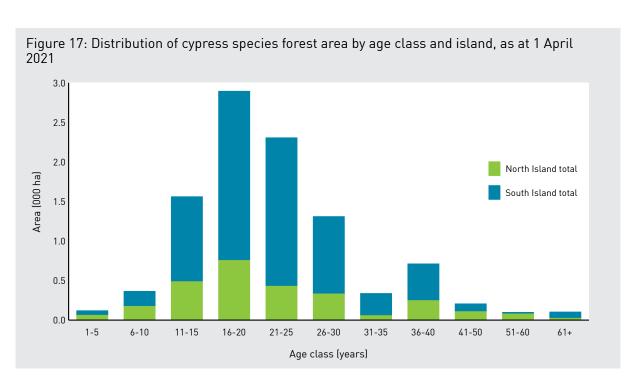


Table 14: Area planted in other softwoods by territorial authority, as at 1 April 2021

						r softwoods						
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years	31-35 Years	36-40 Years	41-50 Years	51-60 Years	61+ Year	Total
Northland wood supply region	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)
Far North District	63	5	0	101	96	102	9	13	10	42	С	С
Whangarei District	20	1	0	19	108	38	3	0	4	11	С	С
Kaipara District	22	0	0	С	57	8	14	С	0	С	С	151
Auckland Council	С	0	3	40	42	53	8	25	16	2	3	С
Region total	С	6	3	С	303	201	34	С	30	С	66	1,041
Central North Island wood supply re	egion											
Thames-Coromandel District	0	2	0	6	6	17	2	17	4	3	23	80
Hauraki District	0	1	23	17	16	0	0	1	0	8	0	66
Waikato District	5	0	5	66	36	19	12	4	0	0	7	154
Matamata-Piako District	0	1	0	12	12	5	0	1	0	0	3	34
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	6	18	11	34	113	72	0	2	2	0	10	268
Rotorua District	35	76	43	12	128	75	30	51	41	19	37	547
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	15	0	20	53	38	13	С	111	5	28	С
Opotiki District	1	4	0	2	0	3	1	0	0	0	0	11
Waipa District	0	0	0	6	38	18	2	1	1	0	1	67
Otorohanga District	0	0	0	5	7	22	24	3	0	3	0	64
Waitomo District	0	0	1	11	32	37	1	5	9	12	9	117
Ruapehu District	438	458	5	29	220	118	5	5	76	12	13	1,379
South Waikato District	С	5	0	0	C	С	26	С	C	1	38	174
Taupo District	45	113	23	12	62	56	64	25	40	33	26	499
Region total	С	693	111	232	С	С	180	133	C	96	195	С
East Coast wood supply region												
Gisborne District	56	178	45	88	37	92	4	44	164	154	25	887
Region total	56	178	45	88	37	92	4	44	164	154	25	887
Hawke's Bay wood supply region												
Wairoa District	102	174	24	83	26	18	0	2	24	28	21	502
Hastings District	48	С	52	18	51	55	6	35	С	5	12	362
Napier City	0	0	0	0	0	0	0	2	0	0	0	2
Central Hawkes Bay District	С	С	1	21	34	13	16	10	1	3	С	201
Region total	С	234	77	122	111	86	22	49	С	36	C	1,067
Southern North Island wood supply	region											
New Plymouth District	0	59	129	130	333	21	9	3	3	3	0	690
Stratford District	84	393	3	11	3	9	0	1	4	31	17	556
South Taranaki District	0	0	1	26	30	32	7	0	0	0	3	99
Wanganui District	93	0	3	111	43	52	2	13	1	1	1	320
Rangitikei District	0	324	99	263	142	19	31	6	9	4	14	911
Manawatu District	4	0	1	40	22	24	6	14	3	0	10	124
Kapiti Coast District	0	0	0	7	9	12	1	0	0	0	0	29
Upper Hutt City	0	0	0	1	3	7	9	0	0	14	9	43
Porirua City	0	0	0	0	0	6	0	0	0	0	0	6
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	2	0	2	0	0	0	0	4
Palmerston North City	0	14	0	0	0	0	1	0	0	0	0	15
Tararua District	0	0	0	11	17	6	3	259	8	0	2	306
Masterton District	0	4	11	48	60	45	10	43	19	43	14	297
Horowhenua District	0	0	7	5	7	18	10	0	3	0	1	51
Carterton District	0	0	0	1	15	12	3	1	0	43	0	75
South Wairarapa District	0	0	0	8	10	1	4	0	1	0	5	29
Region total	181	794	254	662	696	264	98	340	51	139	76	3,555

	Other softwoods											
					Age	class (year						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood sup	ply region											
Nelson City	0	0	0	0	1	1	0	23	15	6	8	54
Tasman District	68	3	55	134	83	165	19	178	206	27	26	964
Marlborough District	С	14	5	120	108	68	27	12	31	4	0	С
Kaikoura District	0	0	0	0	7	0	0	0	1	0	0	8
Region total	C	17	60	254	199	234	46	213	253	37	34	С
West Coast wood supply region												
Buller District	1	0	0	1	6	23	0	53	131	1	5	221
Grey District	45	0	0	2	4	5	С	15	131	54	22	С
Westland District	43	0	1	80	170	30	0	14	21	9	20	388
Region total	89	0	1	83	180	58	С	82	283	64	47	С
Canterbury wood supply region												
Hurunui District	109	9	539	536	62	44	5	290	91	155	48	1,888
Waimakariri District	88	2	21	0	16	127	15	1	15	0	1	286
Christchurch City	0	7	0	38	83	936	47	22	6	2	8	1,149
Selwyn District	102	0	0	12	87	144	39	4	7	0	0	395
Ashburton District	0	0	1	18	66	29	С	12	0	0	34	С
Timaru District	0	0	45	8	230	120	138	2	3	6	8	560
Mackenzie District	12	11	24	8	57	570	21	С	18	64	134	С
Waimate District	9	11	15	62	164	61	7	115	50	6	0	500
Region total	320	40	645	682	765	2,031	С	C	190	233	233	6,085
Otago and Southland wood supply i	ū											
Waitaki District	8	66	71	24	117	101	1	27	8	5	8	436
Dunedin City	91	72	4	2	7	75	29	8	22	3	11	324
Queenstown-Lakes District	0	0	3	5	1	22	10	0	0	3	0	44
Central Otago District	170	254	108	57	226	495	96	35	23	223	13	1,700
Clutha District	422	133	81	69	275	224	64	100	27	12	47	1,454
Gore District	0	0	4	2	4	141	0	0	0	0	0	151
Southland District	448	106	14	98	43	155	34	62	221	6	12	1,199
Invercargill City	0	0	0	0	0	3	0	0	0	0	0	3
Region total	1,139	631	285	257	673	1,216	234	232	301	252	91	5,311
South Island total	1,618	688	991	1,276	1,817	3,539	628	1,144	1,027	586	405	13,719
New Zealand total	2,730	2,593	1,481	2,564	3,737	4,678	966	1,754	1,609	1,067	848	24,027

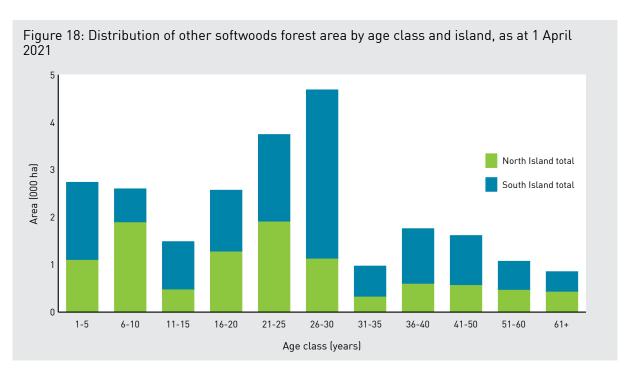


Table 15: Area planted in eucalypts by territorial authority, as at 1 April 2021

	Turbus.											
						lucalypts class (years)						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region												
Far North District	16	5	0	24	13	11	33	91	49	1	10	253
Whangarei District	6	0	0	0	0	41	6	12	57	0	1	123
Kaipara District	23	0	0	0	0	76	0	5	С	1	0	С
Auckland Council	0	С	27	18	С	11	4	9	10	3	0	88
Region total	45	С	27	42	С	139	43	117	С	5	11	С
Central North Island wood supply re												
Thames-Coromandel District	0	0	0	0	0	0	0	34	53	0	9	96
Hauraki District	0	0	0	0	1	0	0	0	0	0	0	1
Waikato District	0	0	0	0	0	1	0	2	0	0	0	3
Matamata-Piako District	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	11	0	7	55	136	4	7	25	2	0	76	323
Rotorua District	77	2	0	0	77	1	0	24	2	0	9	192
Kawerau District	0	0	0	0	31	0	0	0	0	0	0	31
Whakatane District	0	0	0	95	58	51	15	0	1	0	0	220
Opotiki District	0	0	0	0	0	0	4	0	0	0	0	4
Waipa District	0	0	0	0	0	0	0	0	0	0	0	0
Otorohanga District	0	0	0	0	0	0	4	0	0	0	0	4
Waitomo District	0	56	0	0	0	2	1	40	3	0	0	102
Ruapehu District	21	5	33	1	3	0	0	0	0	0	1	64
South Waikato District	С	2,027	178	271	104	0	2	0	0	3	0	С
Taupo District	581	716	528	103	202	234	7	17	2	206	1	2,597
Region total	С	2,806	746	525	612	293	40	142	63	209	96	С
East Coast wood supply region												
Gisborne District	93	245	23	0	29	4	42	12	29	9	6	492
Region total	93	245	23	0	29	4	42	12	29	9	6	492
Hawke's Bay wood supply region	177	0.7	40	140				1		1		466
Wairoa District	177	97	48	142	0	0	0	1	0	1	0	466
Hastings District	62	29	176	1	0	1	6	27	7	1	0	310
Napier City	0	0	0	0	0	6	0	0	0	0	0	6
Central Hawkes Bay District	211	0	220	4	0 <b>0</b>	1	0	0	14	0	1	451
Region total	450	126	444	147	U	8	6	28	21	2	1	1,233
New Plymouth District	O	0	0	0	9	0	0	0	0	0	0	9
Stratford District	0	0	0	0	0	0	0	13	6	5	1	25
South Taranaki District	C	C	2	0	0	0	1	0	0	0	0	44
Wanganui District	0	0	0	0	0	0	0	0	0	0	0	0
Rangitikei District	7	9	6	1	6	7	1	4	0	0	0	41
Manawatu District	35	1	0	0	10	1	0	0	0	0	0	47
	0	0	0	0	0	0	0	0	0	0	0	0
Kapiti Coast District	0		0			0				0		
Upper Hutt City	0	0		0	0		0	13	1		0	15
Porirua City			0	0	0	0	0	0	0	0	0	0
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	10	0	C	C	0	C	0	0	0	0	
Palmerston North City	0	0		0	0	0	0				0	17
Tararua District			0					0	0	0		
Masterton District	28	35	5	1	4	3	0	4	0	0	0	80
Horowhenua District	0	4	0	0	0	1	0	19	2	0	0	26
Carterton District	17	0	0	0	0	0	0	0	122	0	0	17
South Wairarapa District	0	0	0	0	0	0	7	0	123	0	0	130
Region total	C 1 720	C	13	C 701	C	12	C	53	132	5	1	451
North Island total	1,732	3,258	1,253	721	689	456	142	352	376	230	115	9,324

	Eucalypts											
					Age	class (year	s)					
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood sup	pply region											
Nelson City	0	0	0	0	0	0	0	16	1	0	0	17
Tasman District	0	0	0	0	2	6	2	50	191	0	6	257
Marlborough District	25	84	14	13	0	0	12	5	38	12	1	204
Kaikoura District	0	0	0	0	0	0	1	0	0	0	0	1
Region total	25	84	14	13	2	6	15	71	230	12	7	479
West Coast wood supply region												
Buller District	0	0	0	0	0	0	0	80	268	0	7	355
Grey District	10	0	0	0	0	3	0	0	69	0	1	83
Westland District	0	0	0	0	3	0	0	11	28	0	0	42
Region total	10	0	0	0	3	3	0	91	365	0	8	480
Canterbury wood supply region												
Hurunui District	0	0	0	14	0	0	1	0	0	0	0	15
Waimakariri District	0	6	0	0	0	0	0	0	0	0	0	6
Christchurch City	0	0	0	0	15	21	3	0	0	0	10	49
Selwyn District	1	0	0	2	0	0	2	5	0	0	0	10
Ashburton District	1	0	0	0	0	0	0	3	0	0	0	4
Timaru District	0	0	0	3	0	10	0	0	0	0	0	13
Mackenzie District	0	0	0	0	0	0	0	0	0	0	0	0
Waimate District	0	0	0	0	0	0	0	2	0	0	0	2
Region total	2	6	0	19	15	31	6	10	0	0	10	99
Otago and Southland wood supply												
Waitaki District	2	25	20	0	0	0	36	20	10	0	1	114
Dunedin City	0	0	0	0	0	С	19	22	6	0	0	С
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	0	0	0	1	0	6	21	0	0	28
Clutha District	317	32	23	6	406	5	12	143	32	0	2	978
Gore District	274	0	97	0	98	0	35	0	0	0	0	504
Southland District	1,647	2,072	1,143	1,326	2,469	805	355	37	27	2	2	9,885
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	2,240	2,129	1,283	1,332	2,973	C	457	228	96	2	5	C
South Island total	2,276	2,219	1,297	1,364	2,993	863	478	400	691	14	30	12,626
New Zealand total	4,008	5,477	2,550	2,085	3,682	1,319	620	752	1,067	244	145	21,950

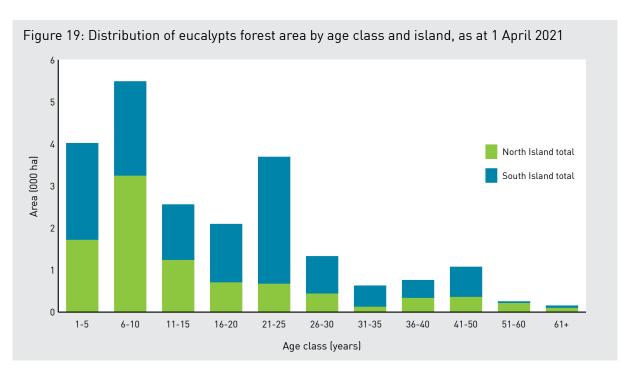


Table 16: Area planted in other hardwoods by territorial authority, as at 1 April 2021

						hardwoods						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region	(114)	(114)	(114)	(1147)	(114)	(1147)	(114)	(114)	(1147	(114)	(114)	(114)
Far North District	113	12	5	281	201	114	22	119	69	С	2	С
Whangarei District	68	1	0	14	140	173	14	11	16	0	2	439
Kaipara District	С	5	1	42	231	37	39	С	С	С	0	391
Auckland Council	С	0	12	44	222	153	53	44	65	5	16	С
Region total	190	18	18	381	794	477	128	С	С	17	20	2,388
Central North Island wood supply reg	gion											
Thames-Coromandel District	0	0	0	3	2	34	2	8	9	0	2	60
Hauraki District	2	3	40	0	17	7	0	0	0	0	6	75
Waikato District	0	0	5	42	4	41	21	6	1	0	1	121
Matamata-Piako District	0	0	0	3	5	14	2	1	0	0	0	25
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	2	8	1	1	1	0	0	0	13
Western Bay of Plenty District	0	0	3	33	43	58	36	37	14	0	1	225
Rotorua District	С	24	0	65	246	82	29	81	20	9	9	С
Kawerau District	0	0	0	0	3	0	0	0	0	0	0	3
Whakatane District	84	0	0	48	87	50	18	6	2	0	2	297
Opotiki District	0	0	3	9	10	3	3	0	0	0	0	28
Waipa District	11	0	0	47	140	13	2	2	9	0	0	224
Otorohanga District	2	0	0	12	8	17	15	21	0	0	2	77
Waitomo District	0	0	0	7	22	38	4	37	3	0	0	111
Ruapehu District	2	2	0	1	5	0	0	10	1	0	0	21
South Waikato District	С	10	15	25	26	19	2	3	0	2	0	С
Taupo District	107	155	1	32	111	52	4	10	10	6	0	488
Region total	233	194	67	329	737	429	139	223	69	17	23	2,460
East Coast wood supply region												
Gisborne District	150	283	С	24	38	88	78	42	29	8	7	С
Region total	150	283	C	24	38	88	78	42	29	8	7	C
Hawke's Bay wood supply region												
Wairoa District	442	60	0	19	0	0	7	3	1	0	0	532
Hastings District	44	103	13	12	40	22	24	14	С	2	4	С
Napier City	0	0	0	0	0	0	0	2	0	0	0	2
Central Hawkes Bay District	88	0	0	8	23	25	4	60	1	0	7	216
Region total	574	163	13	39	63	47	35	79	С	2	11	С
Southern North Island wood supply r			_				_					
New Plymouth District	0	1	0	14	8	18	3	4	1	0	0	49
Stratford District	17	31	3	6	9	47	1	1	0	2	1	118
South Taranaki District	0	0	308	6	24	19	4	2	2	0	0	365
Wanganui District	0	0	1	12	32	33	4	1	1	0	6	90
Rangitikei District	15	0	0	7	60	37	24	4	4	9	37	197
Manawatu District	0	13	0	10	17	27	10	23	16	0	1	117
Kapiti Coast District	0	0	0	2	11	16	1	0	1	0	0	31
Upper Hutt City	0	0	0	0	0	3	0	5	1	0	0	9
Porirua City	0	0	0	0	0	0	1	1	0	0	0	2
Wellington City	0	0	0	0	0	0	0	0	0	0	0	0
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Palmerston North City	0	0	0	8	C	С	0	0	0	0	0	64
Tararua District	1	287	0	12	15	10	6	9	8	3	0	351
Masterton District	0	28	10	22	8	17	19	7	4	4	0	119
Horowhenua District	0	0	0	1	10	59	3	1	0	0	15	89
Carterton District	26	0	0	1	0	6	8	5	20	0	0	66
South Wairarapa District	1	5	0	1	9	34	51	5	9	0	0	115
Region total	60	365	322	102	C	C	135	68	67	18	60	1,782
North Island total	1,207	1,023	598	875	1,838	1,420	515	595	347	62	121	8,601

	Other hardwoods Age class (years)											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood sup	ply region			· ·								
Nelson City	0	0	0	0	0	5	4	0	4	0	5	18
Tasman District	3	0	5	14	70	84	51	25	90	25	30	397
Marlborough District	1	С	С	20	24	98	28	41	29	2	6	316
Kaikoura District	0	0	0	0	0	0	1	0	3	0	0	4
Region total	4	С	С	34	94	187	84	66	126	27	41	735
West Coast wood supply region												
Buller District	14	0	0	7	4	7	9	96	0	0	0	137
Grey District	0	0	75	29	1	5	6	44	2	1	7	170
Westland District	0	0	205	84	124	606	499	356	0	0	73	1,947
Region total	14	0	280	120	129	618	514	496	2	1	80	2,254
Canterbury wood supply region												
Hurunui District	6	0	0	21	8	31	5	10	0	0	0	81
Waimakariri District	0	0	0	0	14	90	17	2	0	0	0	123
Christchurch City	0	0	1	253	168	495	14	21	11	0	0	963
Selwyn District	С	0	0	1	15	77	С	3	2	0	С	197
Ashburton District	1	1	0	0	10	6	8	6	0	0	0	32
Timaru District	0	0	0	5	27	16	14	2	0	4	10	78
Mackenzie District	0	0	0	2	7	30	0	2	3	0	20	64
Waimate District	0	0	0	0	15	20	11	2	0	6	1	55
Region total	C	1	1	282	264	765	С	48	16	10	C	1,593
Otago and Southland wood supply	region											
Waitaki District	8	22	2	2	12	47	1	14	6	0	3	117
Dunedin City	0	0	0	С	С	33	10	8	6	0	35	99
Queenstown-Lakes District	0	0	0	0	0	0	3	0	0	0	0	3
Central Otago District	0	0	0	0	14	59	10	41	1	7	0	132
Clutha District	174	64	322	179	89	50	31	44	19	7	9	988
Gore District	0	0	0	4	3	3	6	0	0	0	0	16
Southland District	73	53	1	19	104	37	23	10	5	1	2	328
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	255	139	325	C	C	229	84	117	37	15	49	1,683
South Island total	365	147	671	644	712	1,799	762	727	181	53	204	6,265
New Zealand total	1,572	1,170	1,269	1,519	2,550	3,219	1,277	1,322	528	115	325	14,866

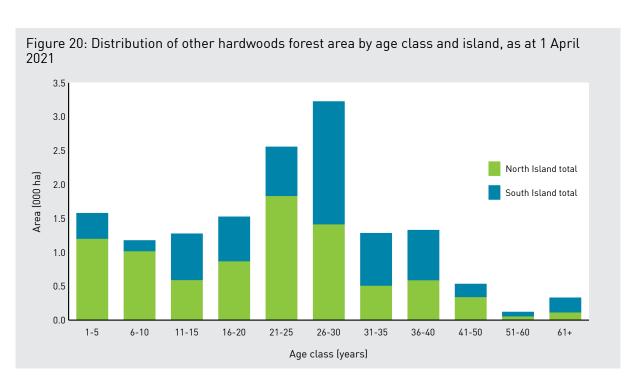


Table 17: Area planted in radiata pine pruned with production thinning by territorial authority, as at 1 April 2021

•		•	•							•		
	Radiata pine pruned with production thinning											
						class (years						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region						<u> </u>					<u> </u>	
Far North District	54	С	24	234	1,307	1,460	2,565	1,284	122	4	0	С
Whangarei District	0	0	4	201	900	1,197	350	40	233	108	1	3,034
Kaipara District	33	150	1	40	1,089	1,477	187	27	90	4	4	3,102
Auckland Council	0	112	35	742	1,353	1,749	152	233	463	62	1	4,902
Region total	87	С	64	1,217	4,649	5,883	3,254	1,584	908	178	6	С
Central North Island wood supply re	gion											
Thames-Coromandel District	0	16	60	39	116	358	45	122	78	0	0	834
Hauraki District	0	С	С	25	226	311	8	11	24	0	0	627
Waikato District	4	26	17	806	1,935	728	152	21	37	0	0	3,726
Matamata-Piako District	0	0	0	21	72	75	22	16	10	0	0	216
Hamilton City	2	0	0	0	3	8	0	1	0	0	0	14
Tauranga District	0	0	0	1	2	6	0	5	0	0	0	14
Western Bay of Plenty District	52	151	82	304	465	1,347	133	73	31	0	0	2,638
Rotorua District	0	130	243	1,407	678	998	С	34	164	1	8	С
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	0	902	1,514	920	966	8	27	34	6	0	4,377
Opotiki District	0	0	5	2	7	34	0	0	11	0	0	59
Waipa District	0	97	0	37	308	336	29	25	28	0	0	860
Otorohanga District	0	0	0	73	122	419	47	17	13	0	0	691
Waitomo District	16	88	28	132	1,106	1,197	123	93	30	0	0	2,812
Ruapehu District	510	0	110	С	2,069	1,676	34	44	39	0	0	С
South Waikato District	0	0	0	11	53	123	7	71	3	0	0	268
Taupo District	0	172	2,076	5,676	3,660	1,463	1,532	293	0	14	0	14,886
Region total	584	С	С	С	11,742	10,045	С	853	502	21	8	40,856
East Coast wood supply region												
Gisborne District	0	27	1	243	916	1,707	504	196	118	0	0	3,712
Region total	0	27	1	243	916	1,707	504	196	118	0	0	3,712
Hawke's Bay wood supply region												
Wairoa District	105	176	34	37	180	691	11	17	С	2	0	С
Hastings District	252	763	42	191	455	2,696	282	293	168	2	1	5,145
Napier City	0	0	0	0	6	0	0	2	0	0	0	8
Central Hawkes Bay District	433	212	118	187	1,005	2,107	217	225	С	7	0	С
Region total	790	1,151	194	415	1,646	5,494	510	537	429	11	1	11,178
Southern North Island wood supply	region											
New Plymouth District	13	2	1	91	139	329	155	103	31	1	0	865
Stratford District	0	0	3	88	88	917	68	6	23	0	1	1,194
South Taranaki District	0	216	45	449	1,570	797	214	118	163	4	3	3,579
Wanganui District	0	94	78	893	3,012	2,379	960	21	43	29	0	7,509
Rangitikei District	382	98	92	444	629	2,664	202	204	175	4	0	4,894
Manawatu District	50	92	30	242	380	1,200	С	182	С	8	0	2,542
Kapiti Coast District	0	36	0	147	324	465	21	41	27	0	0	1,061
Upper Hutt City	0	0	0	12	94	85	49	46	11	5	24	326
Porirua City	0	0	0	0	14	108	32	132	7	0	0	293
Wellington City	0	0	68	0	23	39	38	2	2	0	0	172
Lower Hutt City	0	0	0	0	46	0	3	0	29	0	0	78
Palmerston North City	0	С	22	157	132	230	31	4	69	0	0	С
Tararua District	С	217	С	148	222	1,209	237	217	106	7	0	2,767
Masterton District	С	55	10	160	238	814	95	С	62	1	4	1,753
Horowhenua District	3	0	5	90	207	1,119	227	205	С	С	С	1,948
Carterton District	0	0	0	29	16	75	7	11	1	4	0	143
		0 26	0 5	29 88	16 182	75 136	7 21	24	1 C	8	0	143 C
Carterton District	0											

	Radiata pine pruned with production thinning											
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	class (years 26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood sup	ply region											
Nelson City	0	0	0	0	5	90	0	0	0	0	0	95
Tasman District	22	15	48	159	738	1,648	225	209	81	10	1	3,156
Marlborough District	202	308	142	355	1,814	3,285	366	391	107	0	0	6,970
Kaikoura District	0	0	0	4	50	88	8	4	7	0	0	161
Region total	224	323	190	518	2,607	5,111	599	604	195	10	1	10,382
West Coast wood supply region												
Buller District	0	0	0	1	28	21	2	0	0	0	0	52
Grey District	0	20	90	0	19	172	0	51	84	0	0	436
Westland District	0	0	0	4	47	36	0	23	0	0	0	110
Region total	0	20	90	5	94	229	2	74	84	0	0	598
Canterbury wood supply region												
Hurunui District	0	10	42	369	759	1,325	222	163	181	58	3	3,131
Waimakariri District	0	0	3	39	179	998	133	78	4	26	0	1,460
Christchurch City	0	20	0	148	594	627	78	60	23	0	0	1,550
Selwyn District	0	С	С	7	С	477	С	74	92	С	0	970
Ashburton District	0	0	2	25	104	147	22	41	13	28	0	382
Timaru District	0	24	1	96	371	410	174	79	52	14	0	1,221
Mackenzie District	0	0	0	21	87	163	22	50	6	1	0	350
Waimate District	4	0	1	42	235	168	88	54	14	0	0	606
Region total	4	C	C	747	C	4,315	C	600	385	C	3	9,671
Otago and Southland wood supply	region											
Waitaki District	0	5	6	121	299	825	64	62	139	2	0	1,523
Dunedin City	0	18	13	14	73	827	77	26	0	0	0	1,048
Queenstown-Lakes District	0	0	0	0	0	С	0	31	С	0	0	111
Central Otago District	0	0	0	44	С	98	10	С	4	0	37	316
Clutha District	348	78	30	179	1,541	1,846	123	86	66	16	0	4,313
Gore District	0	0	0	10	218	449	17	3	19	16	0	732
Southland District	11	110	61	642	1,431	990	193	228	255	39	0	3,960
Invercargill City	0	0	0	3	1	62	0	0	1	0	0	67
Region total	359	211	110	1,013	C	С	484	C	C	73	37	12,070
South Island total	587	610	443	2,283	8,807	14,767	1,931	1,806	1,213	233	41	32,721
New Zealand total	2,839	3,640	4,922	17,677	35,076	50,462	11,191	6,342	4,129	530	91	136,898

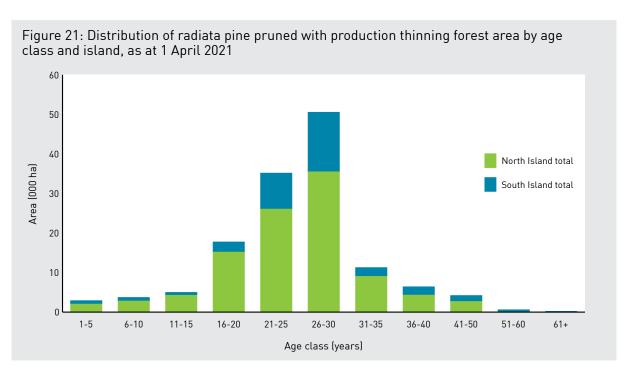


Table 18: Area planted in radiata pine unpruned with production thinning by territorial authority, as at 1 April 2021

				Radiata p		ed with prod class (years)	uction thin	ining				
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years	31-35 Years	36-40 Years	41-50 Years	51-60 Years	61+ Year	Total
Northland wood supply region	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)
Far North District	С	1,475	2,251	1,427	585	С	0	С	С	0	0	6,725
Whangarei District	0	0	0	0	0	1	0	0	3	0	0	
Kaipara District	0	0	0	26	C	383	0	0	0	С	0	429
Auckland Council	0	0	1	33	211	450	5	0	0	0	0	700
Region total	C	1,475	2,252	1,486	С	С	5	С	C	C	0	7,858
Central North Island wood supply re		, -	, -	,								
Thames-Coromandel District	2	21	75	142	С	59	0	0	40	0	0	(
Hauraki District	0	0	0	0	0	0	0	0	0	0	0	(
Waikato District	0	0	0	0	3	11	0	0	0	0	0	14
Matamata-Piako District	0	0	0	0	0	0	0	0	0	0	0	C
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	(
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	(
Western Bay of Plenty District	0	9	0	53	90	65	0	0	0	0	0	217
Rotorua District	1,815	247	99	19	102	107	0	0	0	0	1	2,390
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	2,550
Whakatane District	2,261	461	423	188	53	102	0	0	0	0	0	3,488
Opotiki District	0	0	0	12	12	2	0	40	0	0	0	66
Waipa District	0	0	0	6	44	24	0	0	0	0	0	74
Otorohanga District	0	0	0	13	8	8	2	0	0	0	0	31
Waitomo District	0	7	3	87	292	398	2	0	0	0	0	789
	247	29		205	749	557	202	0	0	0	0	2,119
Ruapehu District			130									
South Waikato District	0	0	0	142	9	20	0	0	0	0	0	33
Taupo District	15,947	6,044	47	143	397	440	374	0	3	0	0	23,395
Region total	20,272	6,818	777	872	С	1,793	580	40	43	0	1	C
East Coast wood supply region	0	726	0	40	0	227	10	100	0	0	0	1.627
Gisborne District	0 <b>0</b>	736 <b>736</b>	0	40	C C	337	18	108	C C	0 <b>0</b>	0 <b>0</b>	1,637
Region total	U	/30	0	40	U	337	18	108	· ·	U	U	1,637
Hawke's Bay wood supply region  Wairoa District	0	0	0	8	146	88	0	33	0	0	0	275
Hastings District	51	280	0	6	60	496	3	0	5	2	0	903
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	0	0	0	1	23	8	7	15	4	0	0	58
Region total	. 51	280	0	15	229	592	10	48	9	2	0	1,236
Southern North Island wood supply					-						0	
New Plymouth District	0	2	0	4	6	68	0	0	0	0	0	80
Stratford District	0	0	0	0	0	0	0	0	0	0	0	0
South Taranaki District	0	0	0	0	0	12	0	3	2	0	0	17
Wanganui District	0	160	141	1	20	152	10	0	0	0	0	484
Rangitikei District	0	96	221	865	С	427	18	0	9	0	2	C
Manawatu District	0	0	0	16	1	10	0	8	0	0	0	35
Kapiti Coast District	0	0	0	0	0	10	0	0	0	0	0	10
Upper Hutt City	0	0	0	0	0	0	0	0	0	0	0	C
Porirua City	0	0	0	0	0	0	0	0	0	0	0	C
Wellington City	7	0	0	28	0	0	8	0	0	0	0	43
Lower Hutt City	0	0	0	0	0	0	0	0	0	0	0	C
Palmerston North City	0	0	0	0	1	41	0	0	0	0	0	42
Tararua District	0	0	1	18	63	С	19	18	11	0	0	C
Masterton District	25	54	89	82	68	136	11	22	2	0	0	489
Horowhenua District	244	С	С	С	С	С	0	0	С	С	С	2,690
Carterton District	0	0	0	0	5	3	0	3	0	0	0	11
South Wairarapa District	0	44	2	198	132	20	10	6	3	0	0	415
Region total	276	С	С	C	1,746	1,315	76	60	C	C	C	7,109
	20,928	9,937	3,961	4,388	4,941	4,915	689	362	670	33	43	50,867

				Radiata p			oduction thi	nning				
						class (year						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood sup	ply region											
Nelson City	0	0	0	0	4	8	0	0	0	0	0	12
Tasman District	С	27	37	235	170	324	26	105	63	22	0	С
Marlborough District	0	23	3	47	154	301	99	50	204	3	0	884
Kaikoura District	0	0	0	0	1	5	0	0	0	0	0	6
Region total	C	50	40	282	329	638	125	155	267	25	0	C
West Coast wood supply region												
Buller District	0	0	0	0	0	0	0	0	0	0	0	0
Grey District	0	0	0	0	5	0	0	0	0	0	0	5
Westland District	0	0	0	0	0	0	0	0	4	0	0	4
Region total	0	0	0	0	5	0	0	0	4	0	0	9
Canterbury wood supply region												
Hurunui District	С	С	С	104	207	198	С	С	45	0	0	659
Waimakariri District	0	0	0	11	37	129	25	12	10	6	2	232
Christchurch City	0	0	0	9	88	20	3	7	0	1	0	128
Selwyn District	0	0	0	118	262	138	12	6	23	0	1	560
Ashburton District	0	0	1	2	26	26	20	0	37	0	0	112
Timaru District	30	0	0	1	6	59	18	22	4	0	0	140
Mackenzie District	0	10	111	18	22	18	13	16	24	20	0	252
Waimate District	25	0	0	1	28	58	10	2	3	1	0	128
Region total	C	C	С	264	676	646	С	С	146	28	3	2,211
Otago and Southland wood supply	region											
Waitaki District	27	0	1	0	20	С	С	С	0	0	0	188
Dunedin City	0	0	0	0	16	8	0	5	0	0	0	29
Queenstown-Lakes District	0	0	0	0	1	0	0	0	0	0	0	1
Central Otago District	0	0	0	0	0	3	0	0	0	0	0	3
Clutha District	262	С	112	907	104	77	С	С	С	0	0	1,556
Gore District	0	0	0	0	6	38	0	0	0	0	0	44
Southland District	7	0	184	410	385	117	5	15	30	51	0	1,204
Invercargill City	0	0	0	1	5	5	0	0	0	0	0	11
Region total	296	C	297	1,318	537	C	48	94	C	51	0	3,036
South Island total	445	97	456	1,864	1,547	1,612	329	347	450	104	3	7,254
New Zealand total	21,373	10,034	4,417	6,252	6,488	6,527	1,018	709	1,120	137	46	58,121

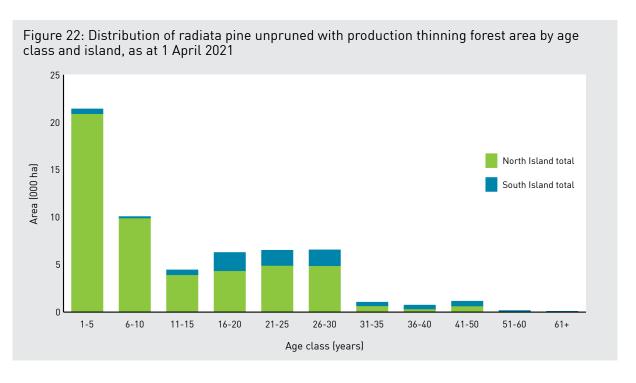


Table 19: Area planted in radiata pine pruned without production thinning by territorial authority, as at 1 April 2021

1021												
				Radiata		l without pro		nning				
						class (years						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region												
Far North District	622	698	973	2,215	5,857	5,827	1,963	536	246	7	0	18,944
Whangarei District	14	398	36	432	2,166	1,886	120	54	87	0	2	5,195
Kaipara District	1,015	26	241	922	3,186	1,827	274	156	49	С	5	С
Auckland Council	99	373	С	686	2,150	1,916	109	195	692	2	2	С
Region total	1,750	1,495	C	4,255	13,359	11,456	2,466	941	1,074	C	9	38,592
Central North Island wood supply re	egion											
Thames-Coromandel District	110	25	11	107	140	499	С	С	70	1	0	1,688
Hauraki District	29	0	0	66	619	578	28	8	0	0	0	1,328
Waikato District	270	266	53	741	1,047	2,038	303	76	57	0	49	4,900
Matamata-Piako District	0	41	1	10	61	241	1	3	9	0	0	367
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	9	26	32	16	0	0	0	0	83
Western Bay of Plenty District	116	345	171	1,044	1,986	2,498	128	58	200	0	0	6,545
Rotorua District	370	1,588	1,021	1,964	5,200	2,285	341	40	41	3	1	12,854
Kawerau District	0	0	0	0	0	6	0	0	0	0	0	6
Whakatane District	114	1,112	2,026	1,295	9,948	5,046	83	78	306	2	0	20,010
Opotiki District	0	334	113	526	469	243	С	78	77	0	0	С
Waipa District	0	41	55	97	268	167	29	17	2	0	0	676
Otorohanga District	97	131	10	851	282	544	72	8	22	0	0	2,017
Waitomo District	197	0	С	1,644	4,075	3,514	257	57	35	0	0	С
Ruapehu District	С	490	112	1,687	3,508	1,661	816	716	3	0	0	С
South Waikato District	40	8	С	400	898	427	10	С	С	0	0	1,801
Taupo District	444	8,508	13,595	12,234	11,637	3,791	834	407	С	С	С	51,529
Region total	C	12,889	17,249	22,675	40,164	23,569	3,079	2,244	878	С	С	124,778
East Coast wood supply region												
Gisborne District	4,744	8,308	3,682	10,622	23,820	25,560	4,146	2,736	768	18	5	84,410
Region total	4,744	8,308	3,682	10,622	23,820	25,560	4,146	2,736	768	18	5	84,410
Hawke's Bay wood supply region												
Wairoa District	3,183	5,049	3,959	7,485	9,004	12,815	39	101	185	1	1	41,822
Hastings District	2,061	2,089	1,570	6,291	6,869	6,768	229	59	101	8	3	26,048
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawkes Bay District	219	336	494	939	2,504	2,361	85	48	54	8	1	7,049
Region total	5,463	7,474	6,023	14,715	18,377	21,944	353	208	340	17	5	74,919
Southern North Island wood supply	region											
New Plymouth District	7	81	114	347	458	442	44	16	28	0	0	1,537
Stratford District	41	157	9	107	329	1,606	47	71	2	0	0	2,369
South Taranaki District	127	69	24	256	603	2,098	77	36	122	0	0	3,412
Wanganui District	503	671	811	1,100	1,994	4,720	653	69	25	4	64	10,614
Rangitikei District	49	207	47	368	4,108	1,617	93	64	72	2	0	6,627
Manawatu District	0	37	20	225	262	960	74	62	83	1	0	1,724
Kapiti Coast District	43	64	90	91	171	687	124	39	2	0	0	1,311
Upper Hutt City	0	0	34	358	233	339	13	14	19	0	1	1,011
Porirua City	0	10	3	123	18	202	0	0	С	3	0	С
Wellington City	0	0	0	8	С	253	5	12	0	0	0	С
Lower Hutt City	0	0	0	10	2	24	0	38	7	0	0	81
Palmerston North City	59	296	45	1	10	263	6	11	37	0	0	728
Tararua District	152	1,048	606	647	674	1,344	205	86	175	23	3	4,963
Masterton District	2,807	1,995	1,956	2,705	5,746	6,746	577	876	182	14	5	23,609
Horowhenua District	125	141	125	174	97	611	67	30	33	1	0	1,404
Carterton District	935	1,048	830	632	2,273	1,316	53	54	86	0	0	7,227
South Wairarapa District	0	647	199	472	1,459	900	39	10	22	0	0	3,748
South Wairarapa District Region total	0 <b>4,848</b>	647 <b>6,471</b>	199 <b>4,913</b>	472 <b>7,624</b>	1,459 <b>C</b>	900 <b>24,128</b>	39 <b>2,077</b>	10 1,488	22 <b>C</b>	0 48	73	3,748 <b>71,078</b>

	Radiata pine pruned without production thinning											
					Age	class (years	s)					
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood supp	oly region										· ·	
Nelson City	0	38	37	9	119	349	32	26	5	0	0	615
Tasman District	251	435	395	1,471	5,263	4,551	290	146	110	11	0	12,923
Marlborough District	1,116	1,812	893	2,273	5,461	9,500	880	665	409	64	0	23,073
Kaikoura District	0	47	0	59	326	285	7	2	39	0	0	765
Region total	1,367	2,332	1,325	3,812	11,169	14,685	1,210	839	563	75	0	37,376
West Coast wood supply region												
Buller District	0	0	0	14	134	424	17	5	37	0	0	631
Grey District	0	С	378	1,240	1,599	669	50	46	74	60	0	С
Westland District	0	0	112	679	672	610	42	15	79	6	0	2,215
Region total	0	C	490	1,933	2,405	1,703	109	66	190	66	0	С
Canterbury wood supply region												
Hurunui District	121	62	66	421	1,570	1,445	229	246	154	5	0	4,318
Waimakariri District	0	286	85	153	144	571	83	25	5	0	0	1,352
Christchurch City	7	166	23	175	701	1,758	134	183	77	0	1	3,225
Selwyn District	0	10	7	55	462	252	19	40	5	0	0	850
Ashburton District	2	55	5	43	138	177	21	5	3	0	0	449
Timaru District	71	233	136	292	531	679	454	34	1	0	0	2,431
Mackenzie District	0	31	15	99	162	734	23	30	С	4	0	С
Waimate District	105	67	210	391	1,850	703	135	68	0	0	0	3,529
Region total	306	910	547	1,629	5,558	6,319	1,098	631	C	9	1	С
Otago and Southland wood supply r	egion											
Waitaki District	53	1,015	326	2,029	2,912	1,232	114	300	64	34	5	8,084
Dunedin City	2,034	442	432	539	1,234	2,151	360	212	39	С	0	С
Queenstown-Lakes District	0	0	0	0	3	3	11	0	2	3	1	23
Central Otago District	С	0	С	62	132	575	С	94	72	1	0	986
Clutha District	5,262	2,088	1,437	3,636	9,042	10,022	320	281	367	23	176	32,654
Gore District	0	0	11	85	259	214	24	0	0	1	0	594
Southland District	1,411	1,596	1,669	1,456	3,611	4,839	197	191	199	7	0	15,176
Invercargill City	73	221	29	33	88	44	41	9	10	2	0	550
Region total	С	5,362	С	7,840	17,281	19,080	C	1,087	753	C	182	С
South Island total	10,516	8,636	6,277	15,214	36,413	41,787	3,513	2,623	1,787	227	183	127,176
New Zealand total	29,265	45,273	39,914	75,105	150,601	148,444	15,634	10,240	5,788	343	346	520,952

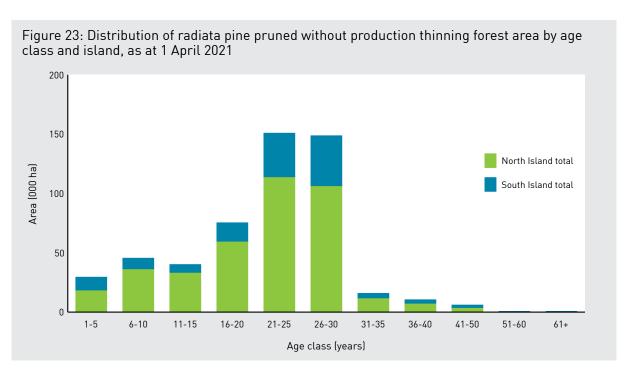
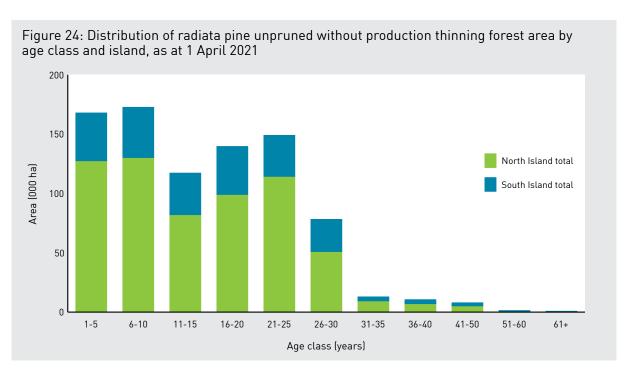


Table 20: Area planted in radiata pine unpruned without production thinning by territorial authority, as at 1 April 2021

2021												
				Radiata pi	ine unprune	ed without pr	oduction th	inning				
					Age	class (years)						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Northland wood supply region												
Far North District	13,577	14,817	7,614	6,462	4,091	3,239	955	848	417	16	1	52,037
Whangarei District	5,552	5,891	2,830	2,840	2,737	1,961	129	215	86	15	0	22,256
Kaipara District	9,156	6,730	2,115	2,481	2,808	1,770	739	251	113	С	3	С
Auckland Council	С	2,109	3,618	6,598	6,233	2,697	123	210	104	21	7	С
Region total	C	29,547	16,177	18,381	15,869	9,667	1,946	1,524	720	С	11	124,907
Central North Island wood supply re	egion											
Thames-Coromandel District	2,343	4,393	4,893	3,943	2,784	1,295	101	272	317	51	25	20,417
Hauraki District	468	276	27	148	184	366	0	4	7	0	0	1,480
Waikato District	1,303	830	1,305	1,147	2,279	1,231	С	С	19	15	8	8,284
Matamata-Piako District	284	61	351	145	7	81	30	17	60	0	0	1,036
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay of Plenty District	2,847	1,976	2,251	2,415	1,269	513	25	62	38	2	0	11,398
Rotorua District	5,304	6,279	5,682	7,058	3,994	1,194	81	40	41	15	5	29,693
Kawerau District	0	0	8	10	10	0	0	0	0	0	0	28
Whakatane District	17,059	18,140	15,189	12,242	12,838	1,941	43	81	19	5	9	77,566
Opotiki District	2,218	4,758	1,132	820	738	441	С	425	20	0	0	С
Waipa District	92	29	13	37	124	115	11	6	1	0	2	430
Otorohanga District	0	84	0	270	640	633	24	65	8	0	0	1,724
Waitomo District	762	380	3,127	2,362	1,267	1,811	133	134	27	0	0	10,003
Ruapehu District	4,818	9,986	2,096	2,016	10,178	2,676	1,240	281	182	1	0	33,474
South Waikato District	11,197	6,173	6,987	12,523	12,803	2,916	5	19	1	26	76	52,726
Taupo District	12,212	19,783	6,155	13,699	14,315	5,634	684	93	84	40	35	72,734
Region total	60,907	73,148	49,216	58,835	63,430	20,847	3,261	С	824	155	160	С
East Coast wood supply region												
Gisborne District	12,954	14,552	5,718	7,300	10,669	6,116	1,835	1,851	1,935	14	19	62,963
Region total	12,954	14,552	5,718	7,300	10,669	6,116	1,835	1,851	1,935	14	19	62,963
Hawke's Bay wood supply region												
Wairoa District	4,947	1,780	1,946	2,394	1,804	1,081	31	68	50	12	3	14,116
Hastings District	5,270	4,439	5,503	5,942	5,246	2,800	114	158	127	26	20	29,645
Napier City	0	0	0	0	0	1	0	6	0	0	0	7
Central Hawkes Bay District	320	216	81	259	2,373	501	164	173	83	26	15	4,211
Region total	10,537	6,435	7,530	8,595	9,423	4,383	309	405	260	64	38	47,979
Southern North Island wood supply			4.0	4.4	100	252	40	01	40			1 400
New Plymouth District	C	C	46	44	186	359	49	21	42	0	0	1,408
Stratford District	691	263	293	329	171	375	28	97	8	0	0	2,255
South Taranaki District	469	C	C	284	358	312	288	С	C	16	С	2,197
Wanganui District	606	959	362	725	412	422	56	99	78	0	9	3,728
Rangitikei District	647	709	125	492	2,862	669	61	61	177	177	3	5,983
Manawatu District	256	498	39	348	386	731	53	78	94	8	5	2,496
Kapiti Coast District	0	39	0	108	144	15	260	120	21	0	0	707
Upper Hutt City	300	525	561	422	537	414	236	231	110	25	10	3,371
Porirua City	3	0	45	6	2	374	8	5	64	0	0	507
Wellington City	0	0	0	0	23	16	19	0	0	0	0	58
Lower Hutt City	0	0	0	0	2	26	0	15	23	0	0	66
Palmerston North City	C	C	C	71	52	84	C	11	85	0	0	1,158
Tararua District	2,139	2,127	235	905	3,621	1,521	242	333	198	20	12	11,353
Masterton District	4,022	673	358	768	1,686	2,282	370	326	330	132	9	10,956
Horowhenua District	561	113	552	583	109	592	50	96	88	0	7	2,751
Carterton District	504	156	301	487	4,034	681	115	50	71	51	0	6,450
South Wairarapa District	1,158	518	65	576	537	1,285	381	180	161	14	2	4,877
Region total	12,306	6,705	3,596	6,148	15,122	10,158	0.010	C	C	443	C	60,321
North Island total	127,703	130,387	82,237	99,259	114,513	51,171	9,619	7,258	5,377	742	290	628,556

				Radiata pi	ne unprune	d without p	roduction th	ninning				
						class (years						
	1-5 Years (ha)	6-10 Years (ha)	11-15 Years (ha)	16-20 Years (ha)	21-25 Years (ha)	26-30 Years (ha)	31-35 Years (ha)	36-40 Years (ha)	41-50 Years (ha)	51-60 Years (ha)	61+ Year (ha)	Total (ha)
Nelson and Marlborough wood supp	oly region											
Nelson City	862	1,195	2,030	1,508	1,174	645	0	83	22	0	0	7,519
Tasman District	10,294	10,176	13,201	12,638	7,433	4,927	190	467	409	90	18	59,842
Marlborough District	7,778	10,029	4,895	4,983	4,969	6,303	737	438	377	69	28	40,606
Kaikoura District	С	0	0	25	32	С	0	16	14	0	2	727
Region total	С	21,400	20,126	19,154	13,608	С	927	1,004	822	159	48	108,694
West Coast wood supply region												
Buller District	661	743	260	152	98	39	41	56	61	4	0	2,115
Grey District	2,519	1,244	1,431	1,155	368	141	2	150	61	81	0	7,152
Westland District	639	844	1,283	366	267	3	16	5	357	15	1	3,796
Region total	3,819	2,831	2,974	1,673	733	183	59	211	479	100	1	13,063
Canterbury wood supply region												
Hurunui District	1,791	2,221	2,125	4,910	5,929	3,053	382	92	100	4	14	20,621
Waimakariri District	262	360	465	721	1,312	1,391	43	49	35	8	36	4,682
Christchurch City	535	352	253	315	279	372	156	96	68	5	23	2,454
Selwyn District	1,468	888	488	456	762	1,009	284	277	78	18	0	5,728
Ashburton District	121	283	286	221	208	145	13	42	0	8	20	1,347
Timaru District	835	135	116	91	313	751	179	42	10	11	0	2,483
Mackenzie District	127	7	35	33	74	201	21	12	45	14	2	571
Waimate District	697	918	435	240	759	306	93	142	39	17	26	3,672
Region total	5,836	5,164	4,203	6,987	9,636	7,228	1,171	752	375	85	121	41,558
Otago and Southland wood supply re	egion											
Waitaki District	3,408	1,887	331	690	767	776	76	41	46	С	15	С
Dunedin City	440	4,107	792	194	122	580	73	118	43	0	13	6,482
Queenstown-Lakes District	0	0	0	10	14	24	12	5	13	1	26	105
Central Otago District	С	0	0	44	82	314	23	36	42	8	15	С
Clutha District	2,721	3,487	3,952	6,065	3,663	2,252	404	230	142	8	12	22,936
Gore District	64	0	6	54	389	376	32	23	30	20	1	995
Southland District	4,046	3,151	2,320	5,274	5,227	3,139	260	641	324	14	16	24,412
Invercargill City	21	0	35	3	6	45	20	8	2	4	0	144
Region total	С	12,632	7,436	12,334	10,270	7,506	900	1,102	642	C	98	63,731
South Island total	39,953	42,027	34,739	40,148	34,247	26,805	3,057	3,069	2,318	415	268	227,047
New Zealand total	167,656	172,415	116,976	139,407	148,760	77,976	12,676	10,327	7,695	1,157	558	855,602



# Appendix 1: Glossary

**Afforestation:** The planting of trees for the primary purpose of producing wood or wood fibre, on land that has not previously been used for growing planted production forests.

**Age:** The ages of forest areas are as at 1 April of the survey year. A forest area is age one as at 1 April 2021 if it was planted in the preceding 12-month period, that is, between 1 April 2020 and 31 March 2021.

**Confidentiality:** Figures are considered confidential if the figure is made up of fewer than three owners' information or where one owner's data makes up more than 80 percent of the number. Forest owners are asked whether they are prepared to waive these strict confidentiality criteria in relation to the data they supply.

If a number is deemed confidential and one of the contributors to the confidential number is not prepared to waive the confidentiality rules, then that number is suppressed and secondary suppression is applied to other cells in the table; see Suppression (Secondary) below.

**Clear fell:** To harvest all merchantable trees within a specified physical area of land.

**Crop type:** For the purpose of the NEFD, a crop type is defined as an aggregate of forest stands of the same species group and tending regime located within the same territorial authority area. The crop type definitions are mutually exclusive.

Land cover types prior to afforestation:

- "Improved pasture" is land that contains improved pasture species, often used for grazing or animal feed, and/or has been fertilised.
- "Unimproved pasture" is land with no improved pasture species and that has not been fertilised.
- "Other woody land" is land predominantly covered in species such as bracken, gorse, mānuka, kānuka or other woody plant species.

**Net stocked forest area:** The planted production forest area occupied by trees, excluding mappable gaps such as landings, roads and other unstocked areas.

New planting: See afforestation.

**Planted production forest:** An area of trees not less than one hectare in size, planted and managed with the intention of producing wood or wood fibre. In New Zealand, almost all planted production forests are made up of exotic (introduced) tree species.

The NEFD survey does not aim to collect information on individual forests. Instead, it collects the forest area by crop type of all forests administered by each forest owner or manager.

**Recoverable volume:** The volume of a tree (in cubic metres) excluding, for example, non-recoverable volume such as stumps and the non-merchantable tops of stems and bark.

**Replanting:** The replanting of a planted production forest area that has been clear felled.

**Rotation number:** The first rotation is a stand of forest planted on land not previously in planted forest. The second and subsequent rotations are stands of forest growing on land from which a previous forest crop has been grown and harvested.

**Species group:** Six groupings of tree species are used to describe the national planted production forest resource:

- Radiata pine (Pinus radiata).
- Douglas-fir (*Pseudotsuga menziesii*).
- Cypress species.
- Other softwoods.
- Eucalypt species.
- Other hardwoods.

Where a mixture of species is present, the area is allocated to the crop type of the dominant species group.

**Stand:** A defined area of standing trees or forest, usually of one species, age and tending regime.

**Standing volume:** The total recoverable volume (in cubic metres) of wood contained in all live crop stems of all age classes

**Suppression (primary):** The removal of a cell's value when it has been deemed sensitive.

**Suppression (secondary):** The suppression of other cells or marginal totals in the table so that the suppressed cell cannot be recalculated.

**Tending regime:** The tending regime is based on the current management, or prior to application of tending, the intention to carry out pruning or production thinning.

\*

# Appendix 2: NEFD Steering Committee's Terms of Reference

The New Zealand Forest Owners' Association (FOA), the New Zealand Farm Forestry Association (NZFFA), and the Ministry for Primary Industries (MPI) have agreed that the Steering Committee shall:

- Oversee the preparation of each edition of the National Exotic Forest Description.
- Engage with the sector to encourage a high response rate, monitor user satisfaction with the NEFD outputs, and identify ways to maintain the quality and relevance of the NEFD programme.
- Advertise and promote the availability and value of NEFD information.
- 4. Produce a five-year strategic plan, which outlines long term strategies to maintain the quality of the information collected, ensures the NEFD remains relevant to all stakeholders, and plans for projects of a longer-term nature such as wood supply forecasts. This strategic plan needs to be submitted to the MPI Deputy Director-General of Policy and Trade, the FOA, and the NZFFA.
- 5. Prepare an annual work plan and budget for NEFD activity, how the objectives of the strategic plan and the needs of stakeholders will be met. This work plan is to be submitted to the MPI Deputy Director-General of Policy and Trade, to the FOA, and the NZFFA by 15 May each year, with periodic progress reports during the year.

- Prepare an annual report reviewing the year's work and achievements. This report is to be submitted to the MPI Deputy Director-General of Policy and Trade, to the FOA, and the NZFFA by 15 May each year.
- 7. Commission forecasts of future wood supply from New Zealand's planted production forests.
- 8. Ensure that all users are able to access NEFD reports and outputs on an equitable basis, with no barriers to access.
- Advise the MPI Senior Leadership Team and the Board of the FOA of any significant issues that the Steering Committee is unable to resolve.

# Appendix 3: NEFD Steering Committee

The NEFD Steering Committee currently comprises eleven representatives nominated by the New Zealand Forest Owners' Association, the New Zealand Farm Forestry Association, and the Ministry for Primary Industries. The current members are:

Member	Nominated By
lan Hinton (Chairman) Timberlands Ltd	New Zealand Forest Owners Association
Tim Clarkson Ministry for Primary Industries	Ministry for Primary Industries
Matt Dilly Ministry for Primary Industries	Ministry for Primary Industries
Egon Guttke New Zealand Farm Forestry Association	New Zealand Farm Forestry Association
Paul Lane Ministry for Primary Industries	Ministry for Primary Industries
Glen Mackie New Zealand Forest Owners Association	New Zealand Forest Owners Association
Bruce Manley School of Forestry, University of Canterbury	New Zealand Forest Owners Association
John Moore Timberlands Ltd	New Zealand Forest Owners Association
Paul Nicholls Independent Consultant	New Zealand Forest Owners Association

# Appendix 4: References

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# Appendix 5: National Exotic Forest Description Technical Report

Version 2021

Introduction	47
Data collection	47
Comparing data collected from sources other than the NEFD	47
Reliability of data	47
Reliability of data from large-scale forest owners	47
Reliability of data from smaller scale owners	47
Reliability of data below national level	48
Quality assurance of NEFD survey data	48
Data for forests smaller than 40 hectares	48
New planting imputations 1992 to 2006	48
Assumptions	48
2004 AsureQuality small forest grower survey	49
Small owner estate	49
Scaling of planting and harvesting data in non-census years	49
Yield tables	49
NEFD survey template 2021	50

#### Introduction

This document provides a detailed overview of the methodology used for the National Exotic Forest Description (NEFD). It contains information on data collection and estimation, reliability of data, yield tables and imputation of data. For the most recent NEFD report, as well as past NEFD publications and other forestry related statistics, please visit the Te Uru Rākau website: https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/. For past copies please contact nefd@mpi.govt.nz.

#### Data collection

The NEFD surveys known forest owners and managers with at least 40 hectares of planted production forest. The survey runs on a two-yearly cycle, where all known foresters with 40 hectares of forest are surveyed one year, and only owners with 1,000 or more hectares the next (see NEFD survey cycle). Respondents either complete the survey via a postal survey or they can complete it online.

#### NEFD survey cycle

Year	2019	2020	2021
Survey frame	Only foresters	All known foresters	Only foresters
	with 1,000 or	with 40 or	with 1,000 or
	more hectares of	more hectares of	more hectare of
	forests <sup>1</sup>	forests	forests <sup>1</sup>

#### Note

The survey is run as a census every two years, as approximately 70
percent of respondents report no change year to year. Large owners
are surveyed every year, as they own approximately 70 percent of
New Zealand's forests and are more likely to engage in planting and
harvesting

In addition to the data collected in the NEFD surveys, the results from the 2004 AgriQuality (now AsureQuality) Small Forest Grower Surveys are used in the NEFD dataset. Details on the methods used by AgriQuality are available in the Small Forest Grower Survey Report (AgriQuality NZ, 2005). Harvest Information from the Forestry Production Statistics (FPS) survey is also presented along with NEFD data. Details for the FPS can be found on Te Uru Rākau's website: https://www.teururakau.govt.nz/news-and-resources/open-data-and-forecasting/forestry/wood-processing/

## Comparing data collected from sources other than the NEFD

The figures released in the NEFD, and in particular, new planting estimates, differ from those produced from the Agricultural Production Survey collected by Statistics New Zealand. These surveys use different survey frames and methodologies and have different survey objectives.

The target population differs for the NEFD and the Agricultural Production Survey (APS). The APS surveys all businesses engaged in "agricultural production activity" (including livestock, cropping, horticulture, and forestry) or own land intended for agricultural activity. Detailed information on the population frame for the Agricultural Production Survey is available on the Statistics New Zealand website: http://www.

stats.govt.nz/survey-participants/a-z-of-our-surveys/agricultural-production-survey.aspx

The forest areas released in the NEFD may also differ from those produced in the New Zealand Land Use Map 1990-2016 (LUM v008) – see: https://environment.govt.nz/facts-and-science/science-and-data/new-zealand-land-use-map/. The NEFD reports net stocked area of planted production forest while the New Zealand Land Use Map reports gross forest area including areas that are not intended for timber production.

Sometimes harvested areas remain unstocked for up to three years before replanting occurs. Often these areas are not recorded year-to-year because the forest owners' tenancy ends at the completion of harvest and the land is returned to the land owners. The landowner or new tenant may not report the same areas in the NEFD survey until they are restocked.

This makes it difficult to reconcile changes in forest area between years. The year-to-year change in total planting minus the areas of deforestation and harvesting reported in the NEFD is therefore not a reliable measure of the total forest area.

#### Reliability of data

There are different levels of reliability associated with data from different scale forest owners.

## Reliability of data from large-scale forest owners

Large-scale forest owners (those with 1,000 hectares or more) own 70 percent of the national forest estate. There are approximately 100 forest owners with more than 1,000 hectares of forest.

Data provided by these owners, and especially those with forests over 10,000 hectares, is considered the most reliable segment within the NEFD area dataset. Large-scale forest owners' forests are managed by professional staff and mapping work and forest inventories are conducted regularly in order to make well informed management decisions. The large-scale forest owners apply relatively consistent definitions of net stocked area.

## Reliability of data from smaller scale owners

Smaller scale forest owners with forests of fewer than 1,000 hectares made up 30 percent of the national forest estate in 2020. There are approximately 1,600 forest owners with between 40 hectares and 999 hectares of forest. The quality of the data provided by owners with fewer than 1,000 hectares is likely to be more variable in nature.

#### For instance:

- Some owners may report the total land area originally taken out of pasture and put into forest without mapping out unstocked gaps. The difference between "gross" forest area and "net stocked" area is generally of the order of 10 to 20 percent.
- It is likely to have a higher degree of non-sampling error as it is more likely to contain reporting inaccuracies and responses based on forest owners' estimates.

 It is also generally not reported electronically, which increases the possibility of errors in reporting the data to MPI and in recording the data in the database.

There is also the possibility that the survey frame contains inaccuracies, which may also contribute to non-sampling error. MPI adopts procedures to detect and minimise non-sampling error, but these errors may still occur and are not easy to quantify.

#### Reliability of data below national level

Finer scale data, such as the area by age class at a territorial authority level, is likely to be less accurate than the total national forest area.

Forest areas are sometimes misallocated between adjacent territorial authorities. One way for users to minimise this problem, is to aggregate data from adjacent territorial authorities – particularly where contiguous forest areas straddle territorial authority boundaries.

#### NEFD data collection schedule

Forest ownership size (ha)	Survey frequency	Estimated data quality
1,000 ha or more	Annually	Good
40 ha to 999 ha	Every two years	Medium
40 ha	Infrequently	Low

#### Quality assurance of NEFD survey data

To minimise possible errors in the NEFD survey data, the following checks were made:

- Numeric data input was limited to certain maximum and minimum values for each entry.
- Aggregated area data was checked at the territorial authority level against the 2020 NEFD area dataset to ensure variation was within acceptable limits.
- For each owner, the data provided was compared with data provided by that owner in the previous surveys.
- The completeness of returns was checked, e.g. checking whether harvesting returns included both area and volume harvested.
- Reconciling related fields, e.g. checking that the new planted and replanted area matched the year one stock total
- A sample of survey data was checked against the original returns to identify data entry errors.

In 2015 a new NEFD system came into use. This system has data quality checks built into data entry and has significantly reduced the number of data entry errors.

Despite the best efforts of the NEFD team some data may still be incorrect. For instance, it is possible that some owners included in the dataset may change their management objectives so an area that is reported as intended to be pruned may not end up being pruned.

## Data for forests smaller than 40 hectares

Forest area data for forests smaller than 40 hectares comes from three sources, listed below in order of total area represented:

- 1. New planting imputations from 1992 to 2006
- 2. A survey of small forest growers from 2004

3. Forests previously surveyed for the NEFD but which have dropped below 40 hectares.

More detail on these sources is provided below.

#### New planting imputations 1992 to 2006

Since 1992, MPI has conducted an annual forest nursery survey. This nursery survey measures the sales of planting stock from commercial forest nurseries. Details of how this survey is operated are described in Predicting and Measuring New Planting from Nursery Surveys (Eyre, 1995). An estimate of total national planting was calculated from the reported numbers of seedlings sold, and estimates of replanting and new planting are then derived. The nursery survey provides the most complete indicator of the area of new forest established each year. In recent years the nursery survey has only been used to estimate the total area of planting. New planting and replanting are not now estimated directly through the survey. The methodology was reviewed in 2003 (Manley et al, 2003), and stocking rate assumptions are reassessed every two years.

For the calendar years 1992 to 2006, additional new planting areas not directly captured in the NEFD surveys were estimated (imputed) based on the nursery survey and added to the NEFD dataset. No additional new planting was added for the 2007 to 2012 calendar years because of the very low levels of new forest planting that took place in those years. The NEFD report compares the new planting figures collected in the NEFD postal surveys with the nursery survey estimates.

The national new planting adjustments were then distributed into territorial authorities using the proportions indicated by the new planting as collected in the postal survey.

Within each territorial authority imputed, new planting was allocated to NEFD crop types using the postal survey results in the following way:

- The imputed new planting was allocated into species groups based on the relative proportions of each species group within the one to five year age class.
- For radiata pine, the imputed new planting was allocated into the four NEFD tending regimes, based on the relative proportion of each of these tending regimes across all the age classes.
- All the douglas-fir imputed new planting was allocated to the "without production thinning" tending regime.

Historically, imputed new planting estimates are revised each year, based on any new information on the area of young forest captured directly in the NEFD survey.

#### **Assumptions**

The inclusion of imputed new planting into the NEFD dataset makes the following assumptions.

- The new planting estimates from the nursery seedling surveys are the actual areas of new planting established between 1992 and 2006.
- The imputed new planting in each territorial authority occurs in the same proportion as the new planting captured in the NEFD surveys.

 Imputed new planting for radiata pine is assigned to the tending regimes in the same proportions as the radiata pine new planting captured in the NEFD surveys.

## 2004 AsureQuality small forest grower survey

In 2004 AsureQuality (then AgriQuality) used their AgriBase database of agriculture businesses to run a survey of small forest owners for MPI. The data from this survey was first included in the 2004 NEFD report, published in 2005. The original survey captured approximately 138,000 hectares of forest, including owners of forests smaller than 40 hectares and some with over 40 hectares not previously captured by the NEFD.

The data was used in aggregated form for the 2005 and 2006 reports. For 2007 onwards the under-40 hectare area was used in aggregate form, representing around 67,000 ha. Owners with 40 hectares or more were added to the core database of owners and sent surveys directly.

#### Small owner estate

Owners of small forests are classified as those with less the 40 hectares of forest. If a forest drops below the 40 hectare cut-off it is no longer part of the survey frame but the data is retained.

# Scaling of planting and harvesting data in non-census years

In non-census years the planting and harvesting data is scaled up to estimate the values from the sub-1,000 hectare forest estate. The approach used since 2009 is as follows, using replanting as an example. The same logic is applied to all planting and harvesting variables.

- 1. For the previous census year, divide the total replanting by the replanting for forests 1,000 hectares and above.
- 2. Multiply the current year's replanting by the result of (1).

#### There are some key assumptions.

- The proportion of sub-1,000 hectare planting and harvesting will be similar from one year to the next.
- The previous census year was not unusual.

Scaling up is only done at the total level and the radiata pine levels. There is too much variability in the smaller species, relating to the above assumptions, to make this a reliable method.

#### Worked example for replanting.

- Census year total replanting 1,000 ha
- Census year 1,000+ hectare replanting 800 ha
- Current year total replanting 900 ha

Scaled replanting

= current year \* (census year total/census year 1,000 +)

= 900 \* (1,000/800)

= 900 \* 1.25

= 1,125

#### Yield tables

Standing volumes from the 2020 NEFD onwards have been calculated using the yield tables produced during the 2014/15 Wood Availability Forecasting project. From 2014 to 2017 the 2005 to 2009 tables were used. Prior to 2014, the yield tables from the 1995 Wood Availability Forecasting project were used. Moving to the more recent yield tables provides greater accuracy and relevance of the figures produced.

The yield tables were produced principally using data provided in 2014 by owners with extensive areas of forest. Data was collected from these owners because their holdings covered most districts in New Zealand – they made up much of the forest resource and they had the most suitable yield data in New Zealand. For further details on the NEFD yield tables, refer to the 2014/15 Wood Availability Forecasts.

The impact of moving from the 2009 to the 2014 yield tables, is a lower standing volume per hectare. This is due to more attention being paid to realised volumes, which incorporates events such as incremental wind throw and crop failure, compared to previous models.

### ANNUAL SURVEY FOR NATIONAL EXOTIC FOREST DESCRIPTION AS AT 1 APRIL 2021



Please complete and return this questionnaire no later than 1 August 2021

### Why is this survey important?

This survey is used to maintain a database of New Zealand's planted exotic production forests. This information is used extensively by government and the wider forestry sector for wood availability forecasting, infrastructure planning, and for developing policy which impacts the forestry sector. The survey is split into the following three sections:

**Section A** 

This section asks you to check your contact details and helps you work out which parts of the form you need to fill in.

**Section B** 

This section collects forest area by age data.

**Section C** 

This section records changes in forest area and collects information on new planting, replanting, harvesting, and land use change.

Section D

This section asks for emergency contact consent as well as comments and feedback.

## Are my responses confidential?

All responses to this survey will be treated as confidential and will only be used for statistical purposes. Personal details provided by individual forest owners and managers are seen only by people directly involved with running the survey.

This information is collected under the statistical provisions of the Forests Act 1949.

For assistance please contact: NEFD SURVEY SUPPORT

Telephone: 0800 008 333
Email: NEFD@mpi.govt.nz

Mail: NEFD Survey Support, Ministry for Primary Industries, PO Box 2526, Wellington 6140

You should receive a survey for each forest over 40HA. If you think one might be missing please let us know.

For assistance please contact survey support on 0800 008 333 or email nefd@mpi.govt.nz

## Section A: Contact Details

Work through the questions in this section and only fill in the information you need to complete.

A 4	Please check the front cover of the	he survey to see if your contact information is correct.
A1	If any changes need to be made	please add them below.
	Contact Name	
	Company Name	
	Contact Address	
	Phone Number	
	Email Address	
A2		rest owner you are completing this survey for. We use this
	information to make sure we are	not double counting forests.
	Forest Owner's Name	
	Company Name Contact Address	
	Contact Address	
	Phone Number	
	Email Address	
<b>A3</b>	Please supply the data below about	out your forest
	Forest Address (if you have multiple forest locations	
	please supply each individual	
	address)	
	LINZ Parcel ID	
	(if you have multiple forest locations please supply each individual ID)	
	piease supply each individual ID)	
I		

<b>A4</b>	Tick one category only. Which best descries the ownership of thi	is fore	est?
	Privately Owned		Registered Public Company
	Local Government		Central Government
	State Owned Enterprise		Other (please specify)
	Māori Trust	_	
<b>A5</b>	Between 1 April 2020 and 31 April 2021, forest or forest land you are completing t		any of the following actions happened to the urvey for?
	<ul> <li>□ Purchased</li> <li>□ Leased or sold</li> <li>□ Handed back</li> <li>□ Planting</li> <li>□ Harvesting</li> <li>□ Pruning</li> <li>□ Thinning</li> <li>□ Damage to you forest</li> </ul>		
	Yes Go to Section B		
	☐ No ► Go to A6		
<b>A6</b>	As there have been no changes to your for Can you please do the following two thin	forest	between 1 April 2020 and 31 March 2021,
	Check the pre-printed pages in Sectio (if they are not correct please make co. 2. Complete Section D and return the for	on B a orrect rm to	re correct ions on the pages) us either by email or in the envelope supplied
	2. Complete decitor B and retain the for		as cliner by email of in the envelope supplied

## Section B: Area by Age as at 1 April 2021

This section provides us with details on what your total stocked area is for all exotic species. If you prefer to supply it to us electronically, please contact survey support.

If you have forest area that is not included in your pre-printed pages you will need a new copy of

If you have forest area that is not included in your pre-printed pages you will need a new copy of questions B2 to B7 for each Territorial Authority. If you would like us to supply these for you, please contact us.

B1	If you have pre-printed pages attached to this survey, tick yes and follow the instructions below. Tick no if you have any forest area that is not included in the pre-printed pages, (see end of Section B for these
	Yes  Check the information on these pages is correct.  If there are any errors, please make corrections on the page. If there are no errors, or you don't have any additional forest area go to Section C.
	No ► Answer questions B2 to B7
DO	Write the Territorial Authority (District Council) where the forest is located, in the box below:
B2	write the Territorial Additionty (District Council) where the forest is located, in the box below.
<b>B3</b>	Tick one category only. Which rotation is this?
	First rotation (area planted in forest for the first time)
	Second or subsequent rotation (area planted following harvesting of existing planted forest)
B4	Tick one category only. Which species is this information for?
	Radiata pine Go to B5
	☐ Douglas-fir
	Cypress
	Other Softwoods Go to B7
	Eucalypt Go to B7
	Other Hardwoods

<b>B5</b>	Tick an answ	er iii eacii cat	egory. write	at is your ix				
	Pruning Reg	ime	Thinnin	g regime				
	Pruned		Pr	oduction Th	inned			
	Unprun	ned	☐ No	Production	n Thinning			
B6 Tick an answer in each category. What is your Douglas-fir tending regime?								
	Produc	tion Thinned						
'								
	No Pro	duction Thinni	ng					
B7	Input the Net	Area (HA) of	forest that	has not pre	viously been	recorded.		
B7	Input the Net		forest that	has not pre		recorded.		
B7	Input the Net	Area (HA) of	forest that	has not pre	Net Area (HA)	recorded.		Net Area (HA)
B7 Year Plante	Tree Age	Net Area	forest that Year Planted	Tree Age in 2021	Net Area	recorded.  Year Planted	Tree Age in 2021	
Year	Tree Age in 2021	Net Area (HA)	Year	Tree Age	Net Area (HA)	Year		(HA) As at
Year Plante	Tree Age in 2021	Net Area (HA)	Year Planted	Tree Age in 2021	Net Area (HA)	Year Planted	in 2021	(HA) As at
Year Plante	Tree Age in 2021  1 2	Net Area (HA)	Year Planted	Tree Age in 2021	Net Area (HA)	Year Planted 1964	in <b>2021</b>	(HA) As at
Year Plante 2020 2019	Tree Age in 2021  1 2 3 3	Net Area (HA)	Year Planted 1992 1991	Tree Age in 2021  29 30	Net Area (HA)	Year Planted 1964 1963	57 58	(HA) As at
Year Plante 2020 2019 2018	Tree Age in 2021  1 2 2 3 3 7 4	Net Area (HA)	Year Planted 1992 1991 1990	Tree Age in 2021  29 30 31	Net Area (HA)	Year Planted 1964 1963 1962	57 58 59	(HA) As at
Year Plante 2020 2019 2018 201	Tree Age in 2021  1 2 3 3 7 4 6 5	Net Area (HA)	Year Planted 1992 1991 1990 1989	Tree Age in 2021  29  30  31  32	Net Area (HA)	Year Planted 1964 1963 1962 1961	57 58 59 60	(HA) As at
Year Plante 2020 2011 2011 2011	Tree Age in 2021  1 2 3 3 7 4 6 5 6 6	Net Area (HA)	Year Planted 1992 1991 1990 1989 1988	Tree Age in 2021  29  30  31  32  33	Net Area (HA)	Year Planted 1964 1963 1962 1961 1960	57 58 59 60 61	(HA) As at
Year Plante 2020 2011 2011 2010 2011	Tree Age in 2021  1 2 3 3 7 4 6 5 6 6 4 7	Net Area (HA)	Year Planted  1992 1991 1990 1989 1988 1987	Tree Age in 2021  29 30 31 32 33 34	Net Area (HA)	Year Planted 1964 1963 1962 1961 1960 1959	57 58 59 60 61 62	(HA) As at
Year Plante 2020 2011 2011 2010 2011 2011	Tree Age in 2021  1 2 3 3 3 7 4 6 5 6 6 4 7 8 8	Net Area (HA)	Year Planted 1992 1991 1990 1989 1988 1987 1986	Tree Age in 2021  29  30  31  32  33  34  35	Net Area (HA)	Year Planted 1964 1963 1962 1961 1960 1959 1958	57 58 59 60 61 62 63	(HA) As at
Year Plante 2020 2011 2011 2010 2014 2014 2015	Tree Age in 2021  1 2 3 3 7 4 6 5 6 6 4 7 8 8 8 9	Net Area (HA)	Year Planted 1992 1991 1990 1989 1988 1987 1986 1985	Tree Age in 2021  29  30  31  32  33  34  35  36	Net Area (HA)	Year Planted 1964 1963 1962 1961 1960 1959 1958 1957	57 58 59 60 61 62 63 64	(HA) As at
Year Plante 2020 2011 2011 2011 2011 2011 2011 201	Tree Age in 2021  1 2 3 3 7 4 6 5 6 6 4 7 8 8 8 2 9 1 10	Net Area (HA)	Year Planted 1992 1991 1990 1989 1988 1987 1986 1985 1984	Tree Age in 2021  29 30 31 32 33 34 35 36 37	Net Area (HA)	Year Planted 1964 1963 1962 1961 1960 1959 1958 1957 1956	57 58 59 60 61 62 63 64 65	(HA) As at
Year Plante 2020 2011 2011 2011 2011 2011 2011 201	Tree Age in 2021  1 2 3 3 7 4 6 5 6 6 4 7 8 8 8 2 9 1 10 0 11	Net Area (HA)	Year Planted  1992 1991 1990 1989 1988 1987 1986 1985 1984 1983	Tree Age in 2021  29  30  31  32  33  34  35  36  37  38	Net Area (HA)	Year Planted  1964 1963 1962 1961 1960 1959 1958 1957 1956 1955	57 58 59 60 61 62 63 64 65 66	(HA) As at
Year Plante 2020 2011 2011 2011 2014 2013 2011 2011 2011 2011	Tree Age in 2021  1 2 3 3 4 4 5 5 6 6 4 7 8 8 2 9 1 10 11 12	Net Area (HA)	Year Planted 1992 1991 1990 1989 1988 1987 1986 1985 1984 1983 1982	Tree Age in 2021  29  30  31  32  33  34  35  36  37  38  39	Net Area (HA)	Year Planted 1964 1963 1962 1961 1960 1959 1958 1957 1956 1955 1954	57 58 59 60 61 62 63 64 65 66 67	(HA) As at

For assistance please contact survey support on 0800 008 333 or email nefd@mpi.govt.nz

1940 or

Prior

<del>80+</del>

**Total Area** 

## Section C:Planting and Harvesting

	п	_		4	Ε		
P	ı	а	n	т	ı	n	O

You will need a new copy of questions C1 to C4 for each different Territorial Authority. If you would like us to supply these for you, please contact us.

C1	Between 1 April 2020 and 31 March 2021 Was there any planting done in this forest estate?
	Yes Go to C2
	No ▶ Go to C5
C2	Write the Territorial Authority (District Council) where the forest is located, in the box below:

C3 Complete the table below for planted and replanted forest area, for the year ended 31 December 2020. (see glossary for species specification)

	New planted area	Replanted area
Radiata Pine	ha	ha
Douglas-fir	ha	ha
Cypress	ha	ha
Other Softwoods	ha	ha
Eucalypt	ha	ha
Other Hardwoods	ha	ha
Total	ha	ha

For the new planted area, what was the land previously used for?

Take the number from the highlighted total box in C3 and place it in the total box below, then separate it into categories of pasture and vegetation.

Improved Pasture Land that has been fertilised and contains improved pasture species	ha
Improved Pasture Land not fertilised, with no improved pasture species sown	ha
Woody Vegetation land predominately covered in broken gorse, manuka, kanuka or other woody species	ha
Total This total should equal the 'new planted area' in question C3	ha

25	Between 1 April 2 Did you carry out				
	Yes	Go to	C6		
	☐ No ▶	Go to	C9		
26	Write the Territori	al Authority	(District Coun	cil) where the forest is loc	cated, in the box below:
7	For the year ende	ed 31 March	2021, please	give the following harves	ting details:
			Clear felled volume	Average age clear felled (area-weighted)	Production thinning volume (recovered)
		salvage logging of windthrown or	the recovered volume of wood (inside bark) from harvesting or clear felling (see glossary for details)	the average age of harvested stands weighted by the area of each stand (see glossary for details)	the recovered volume of wood (inside bark) from thinning for commercial use (see glossary for details)
	Radiata Pine	ha	m3	years	m3
	Douglas-fir	ha	m3		m3
	Cypress	ha	m3		m3
	Other Softwoods Eucalypt	ha ha	m3 m3		m3 m3
	Other Hardwoods	ha	m3	years	m3
8	Write the number 'Total' box below.			r felled volume highlighte grade sold.	ed above in C7 into the
				ades e.g. if a pruned log d' (see glossary for defin	
	unpruned grade,	picase rece	ra ao ampiano	d (See glossary for defini	itions).

	Patusan 1 April 2017 and 21 March 2021
C9	Between 1 April 2017 and 31 March 2021, What area of harvested land was awaiting replanting?
	Include: Area clear felled and intended to be replanted but has not yet been replanted Exclude: Land handed back to the owner
	ha
C10	Between 1 April 2017 and 31 March 2021, What area of harvested land was awaiting a land use decision?
	Include: Area clear felled for which a decision on whether to replant or convert has not yet been made  Exclude: Area given in question C9 and land handed back to the owner
	ha
C11	Between 1 April 2020 and 31 March 2021 Has this forest converted any of its land to a non-forest land use?
	Include: Land that is in the process of being converted to a non-forest land use Exclude: Land handed back to the owner
	Yes Go to C12
	No ▶ Go to Section D
0.40	Between 1 April 2015 and 31 March 2021,
C12	What area of harvested land was converted to a non-forest land use?
	Include: Mature forest on land that is in the process of being converted Exclude: Immature forests or forests younger than 20 years old
	ha
0.10	Between 1 April 2020 and 31 March 2021,
C13	What area of immature forest converted to a non-forest land use?
	Include:  □ Forests younger than 20 years old, those on land that is in the process of being converted  □ Immature forests such as short rotation Eucalypt  Exclude: Mature forests that you talked about in question C12
	ha

## Section D: Contact in an emergency and feedback

<b>)</b> 1	details and total forest area (as reported in this questionnaire) for fire, biosecurity and emergency events only.	
	Yes	
	☐ No	
ease es be	write any comments that would help MPI interpret the information you have provided on the low, or you could emails us at NEFD@mpi.govt.nz	
Pl als	o appreciates and feedback you have on how to improve this questionnaire.	

For assistance please contact survey support on 0800 008 333 or email nefd@mpi.govt.nz



## New Zealand Government