

# National Exotic Forest Description

as at 1 April 2017



New Zealand  
FARM FORESTRY ASSOCIATION



Ministry for Primary Industries  
Manatū Ahu Matua



## Acknowledgements

The Ministry for Primary Industries, the New Zealand Forest Owners Association and the New Zealand Farm Forestry Association wish to thank those forest owners, managers and consultants who provided data for the 2017 National Exotic Forest Description survey.

Thanks also goes to Sarah Clough, Jonathan Flockton, and Stephen Murray for their efforts preparing, coordinating and producing NEFD 2017. Thanks to the NEFD Steering Committee for technical advice and peer review, and to Claudia Riley for publication design and support.

## Enquiries

The Ministry for Primary Industries welcomes any comments or queries on this report.

These can be directed to:

Economic Data and Analysis

Ministry for Primary Industries

PO Box 2526

Wellington 6140

Telephone: 0800 00 83 33

Facsimile: 64-4-894 0741

Email: [stats\\_info@mpi.govt.nz](mailto:stats_info@mpi.govt.nz)

Published by the Ministry for Primary Industries

Pastoral House, 25 The Terrace

PO Box 2526

Wellington 6140 New Zealand

Tel: +64 4 894 0100 or 0800 00 83 33

Fax: + 64 4 894 0741

Web: [www.mpi.govt.nz](http://www.mpi.govt.nz)

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Edition 34

ISSN: 1170-5191

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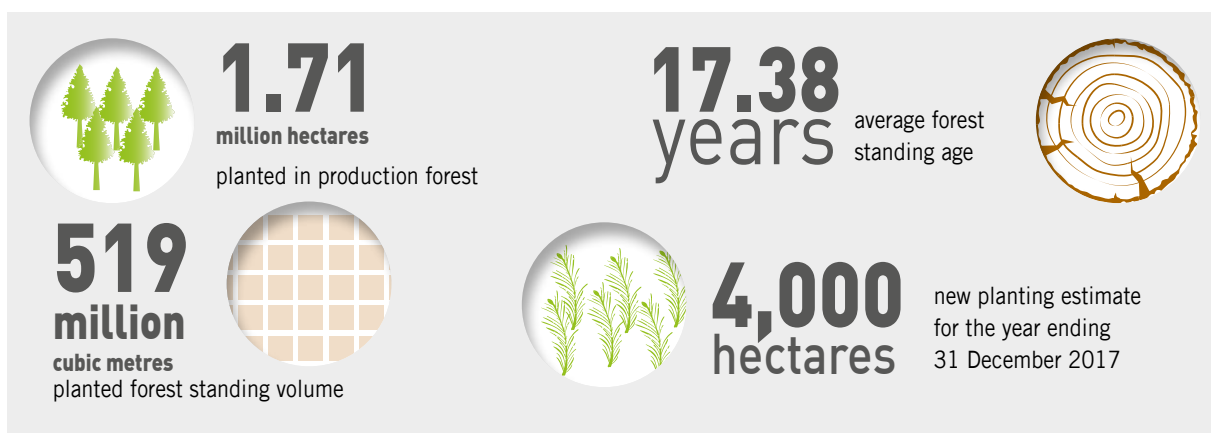
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# Key facts as at 1 April 2017



New Zealand's net stocked planted production forest covered an estimated 1.71 million hectares as at 1 April 2017.

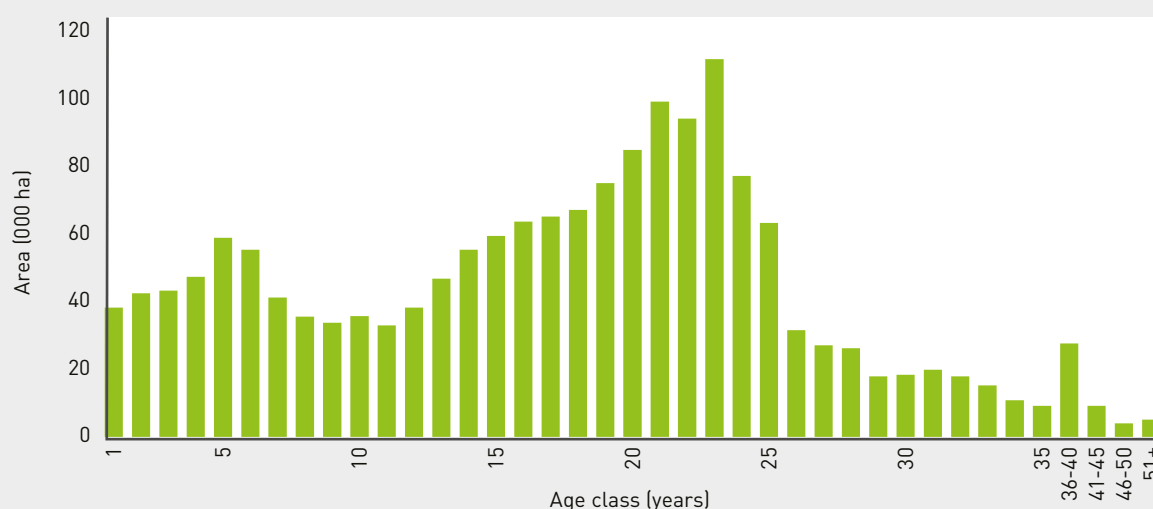
The total planted forest standing volume was estimated to be 519 million cubic metres with an average forest standing age (area weighted) of 17.38 years.

The provisional new planting estimate for the year ending 31 December 2017 is 4,000 hectares. This number may be revised in the 2018 NEFD.

Table 1: provides key national forestry statistics as at 1 April 2017, as well as the statistics for 2015 and 2016 for comparison.

The distribution of the forest area by annual age class is shown in Figure 1. The decrease in area as age increases beyond 23 years indicates harvesting. Of particular note is the large area of forest between 19 to 25 years old, planted between 1992 and 1998. This forest has begun reaching harvest age.

Figure 1: Forest area by annual age class<sup>1</sup>



Note

The area is shown for each age in single years up to 35 years. After this, age classes are aggregated.

Table 1: National exotic forest estate statistics

Area and standing volume statistics	As at 1 April 2015 <sup>4</sup>	As at 1 April 2016	As at 1 April 2017
<b>Forest Area</b>			
Net stocked area (ha)	1,717,715	1,704,747	1,706,429
Harvested area awaiting restocking (ha) <sup>1</sup>	53,903	50,491	48,470
Total forest area	1,771,618	1,755,238	1,754,899
<b>Growth characteristics</b>			
Standing volume (000 m <sup>3</sup> )	501,716	501,460	519,297
Average standing volume (m <sup>3</sup> /ha)	292	294	304
Area-weighted average age (years)	17.08	17.08	17.39
<b>Area by species <sup>2</sup></b>			
Radiata pine (ha)	1,544,480	1,532,734	1,535,510
Douglas-fir (ha)	104,999	104,173	103,726
Cypress species (ha)	10,123	10,140	9,855
Other softwoods (ha)	22,361	22,743	22,539
eucalypts (ha)	23,260	23,182	22,307
Other hardwoods (ha)	12,493	11,775	12,492
<b>Radiata pine area by tending regime</b>			
Pruned with production thinning (ha)	173,538	158,197	154,427
Pruned without production thinning (ha)	637,597	619,747	595,958
Unpruned with production thinning (ha)	33,329	39,675	53,844
Unpruned without production thinning (ha)	700,016	715,116	731,282
<b>Planting statistics</b>			
	Year ended 31 December 2014	Year ended 31 December 2015	Year ended 31 December 2016
<b>New planting<sup>3</sup></b>			
Total estimated new planting (ha)	2,500	3,000	2500
Restocking (ha)	41,353	39,948	40610
<b>Harvesting statistics<sup>5</sup></b>			
	Year ended 31 March 2015	Year ended 31 March 2016	Year ended 31 March 2017
<b>Harvesting</b>			
Area clear felled – all species (ha)	49,896	45,342	44,770
Area clear felled – radiata pine (ha)	46,045	42,567	42,298
Volume clear felled – all species (000 m <sup>3</sup> )	26,492	25,008	24,512
Volume production thinned – all species (000 m <sup>3</sup> )	325	419	328
Total volume removed – all species (000 m <sup>3</sup> ) <sup>6</sup>	26,817	25,427	24,840
Average clear fell yield – all species (m <sup>3</sup> /ha)	537	552	555
Volume clear felled – radiata pine (000 m <sup>3</sup> )	25,036	23,851	23,433
Average clear fell yield – radiata pine (m <sup>3</sup> /ha)	544	560	554
Area-weighted average clear fell age for radiata pine (years)	28.4	29.1	28.4
Estimated planted forest roundwood removal (000 m <sup>3</sup> ) <sup>7</sup>	29,660	29,068	30,650

**Notes**

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 X.
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 2017 survey only sought data from owners with 1,000 hectares of forest or more. These estimates have been rated up based on the 2016 NEFD results for owners with less than 1,000 hectares of forest. See Appendix 5 for more details.
5. All standing and harvest volumes are reported as recoverable volumes (see Appendix 1).
6. These estimates are based on data collected in the 2017 NEFD survey and may differ from the roundwood removals estimate as published in the annual log and roundwood removal statistics, Ministry for Primary Industries. This is due to the estimate from that source being an indirect estimate that uses conversion factors for each forestry product to estimate the total roundwood input that would be required to produce the forest product outputs, as well as the roundwood export data from Statistics New Zealand.
7. Estimate from the annual log and roundwood removal statistics.

[illegible]

# 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) on New Zealand's 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. This publication consists of summarised statistics on:

- 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);
- harvesting and planting estimates for forests larger than 40 hectares; and
- forest ownership for forests larger than 40 hectares.

## 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).

In 2017, questionnaires were sent to all known forest owners and managers with at least 1,000 hectares of planted production forest, and a small number of forest owners and managers with less than 1,000 hectares of planted production forest who met specific criteria<sup>2</sup>.

109 questionnaires were sent out, with an achieved area weighted response rate of 96 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 that fell below the 40 hectare area surveying 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 are in 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 in lieu 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).

## Who uses the NEFD?

The data collected for the NEFD is used to inform government policy, to meet a range of international reporting obligations, and to assist with infrastructure planning decisions. The information is also a useful starting point for investigating 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 and the Ministry for Primary Industries. A full list of this committee can be found in Appendix 3.

## 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 (those with less than 40 hectares).

Table 2. Survey frequency and data quality by forest size

Forest ownership size (hectares)	Survey Frequency	Data quality
1000 or more	Annually	Good
999 to 40	Every two years	Medium
Below 40	Every five to 10 years	Low

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

<sup>1</sup> Tier 1 statistics are the most important statistics, 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](http://www.statisphere.govt.nz/tier1-statistics.aspx)

<sup>2</sup> With permission, MPI collects information annually from businesses with less than 1,000 ha and who only do forestry, in lieu of them completing MPI and Stats NZ's Agricultural Production Statistics (APS) Survey.



## 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).

## What Planting and Harvesting information is collected?

Data is collected as at 31 December<sup>3</sup> on the area of restocking, new planting, and land cover before new planting. In addition, the NEFD survey collects data on harvesting, which includes the area clear felled, the volume clear felled and the volume from production thinning for each year ended 31 March. The survey also collects data on the volume of clear felled radiata pine by generalised log types (pruned logs, unpruned logs, and pulp/chip logs).

## 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 standing volume, 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 MPI website.

## Online resources

An electronic copy of this report is available on the New Zealand Ministry for Primary Industries website: <http://www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>

The Ministry for Primary Industries website also has electronic copies of:

- the tables from the report;
- report and tables from the Wood Availability Forecasts; and
- yield tables.

For specialised requests please contact [stats\\_info@mpi.govt.nz](mailto:stats_info@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.

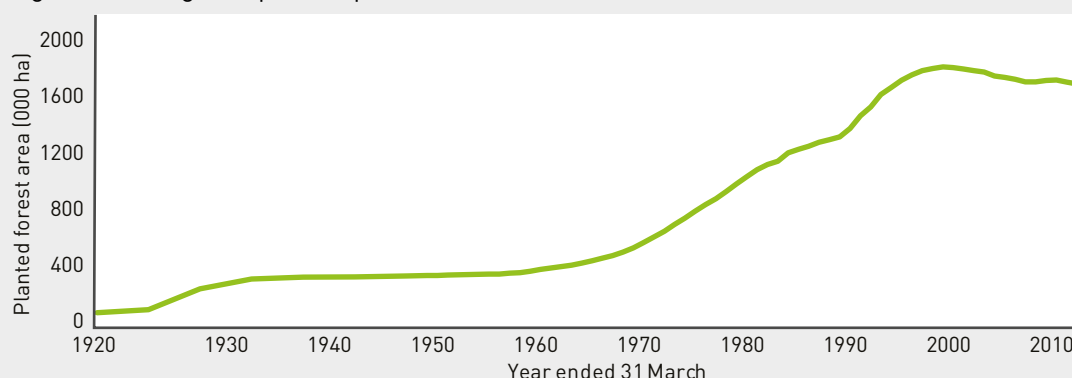
<sup>3</sup> December 31 is used as the year end as planting does not occur in January to March.

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

## Area

As at 1 April 2017, the total net stocked area of planted forest was estimated to be 1.71 million hectares (Figure 3). Including the area of land currently awaiting replanting after harvesting, increases the estimated total forest land area to 1.75 million hectares. This area represents a marginal decrease of less than 500 hectares from 2016. As shown in Table 3, this decrease sits within recent years' net area trends.

Figure 3: Changes in planted production forest area in New Zealand



Source: Until 1987, the statistics were compiled by the New Zealand Forest Service. The figures for 1987 onwards are estimates from NEFD surveys.

### Notes

1. The total planted forest areas have been estimated independently from new planted forest areas. The areas in this table are not the accumulated sums of new forest planting shown in Table 9.1.
2. Prior to 1987, "State" refers principally to the forests planted or managed by the New Zealand Forest Service. Since 1987, "State" refers primarily to the forests owned or managed by State-owned enterprises and West Coast and Maori lease forests managed by the Ministry for Primary Industries. Since 1990 much of the State forest has been sold to the Private sector. These sales include: 1990/91, 249 000 hectares; 1992, 97 000 hectares; 1996, 170 000 hectares; and 2000, 10 000 hectares.
3. Private afforestation figures are based on incomplete historical data, and considerable estimation has taken place.

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

	2010	2011	2012	2013	2014	2015	2016	2017
Area awaiting replanting	55,308	54,325	62,063	51,869	44,642	47,173	50,491	48,470
Net Stocked Area	1,737,590	1,719,465	1,720,839	1,728,499	1,733,432	1,717,550	1,704,747	1,706,429
Total forest area	1,792,898	1,773,790	1,782,902	1,780,368	1,778,074	1,764,723	1,755,238	1,754,899

Table 4: Forest area by annual age class as at 1 April 2017

Age	Area (ha)	Age	Area (ha)	Age	Area (ha)
1	38,275	29	17,922	57	520
2	42,508	30	18,366	58	134
3	43,287	31	19,847	59	136
4	47,355	32	17,856	60	92
5	58,895	33	15,222	61	40
6	55,343	34	10,806	62	54
7	41,225	35	9,135	63	70
8	35,551	36	7,757	64	96
9	33,798	37	6,224	65	115
10	35,715	38	4,666	66	27
11	32,997	39	5,601	67	374
12	38,254	40	3,349	68	69
13	46,794	41	2,488	69	38
14	55,416	42	2,316	70	53
15	59,425	43	2,043	71	17
16	63,698	44	1,329	72	37
17	65,192	45	963	73	62
18	67,140	46	749	74	8
19	75,097	47	1,256	75	17
20	84,967	48	950	76	9
21	99,210	49	691	77	144
22	94,209	50	352	78	24
23	111,841	51	496	79	43
24	77,201	52	521	80	452
25	63,299	53	771		
26	31,533	54	181		
27	27,059	55	256		
28	26,204	56	200		

Note: Net stocked planted production forest area

## Area Distribution by wood supply region

Figure 4: Distribution of forest area by wood supply region, as at 1 April 2017

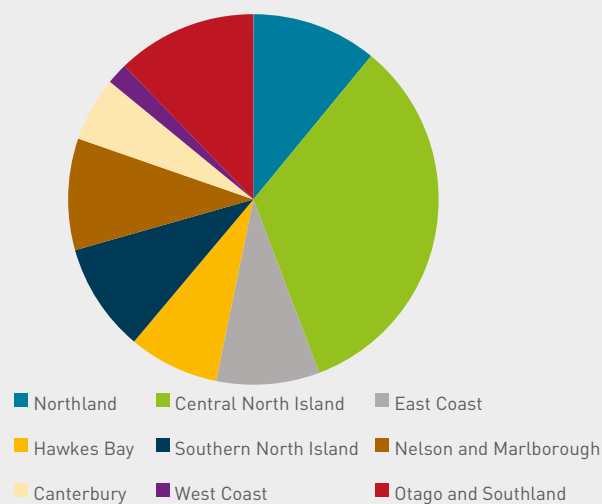


Figure 5: Forest area by age class and wood supply region, as at 1 April 2017

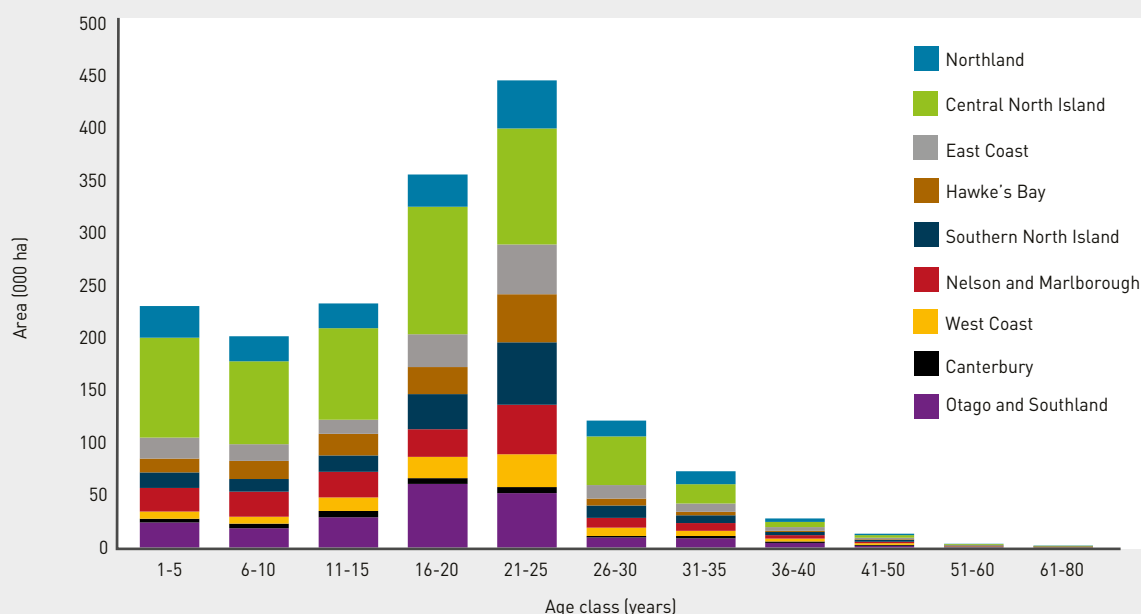
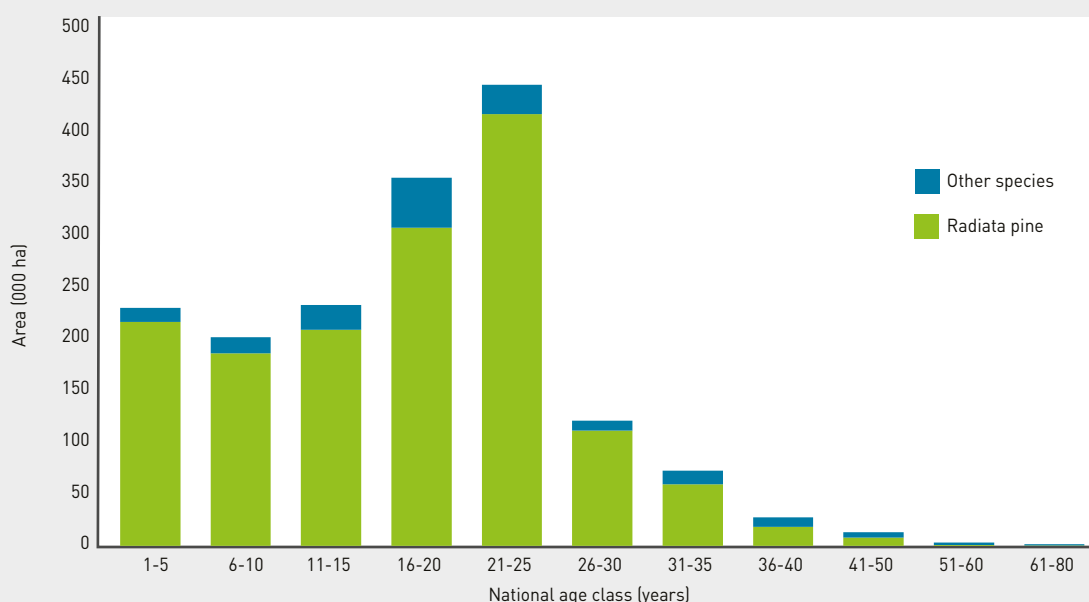


Figure 5 shows the distribution of forests across the nine wood supply regions in New Zealand by age class. The Central North Island has the largest area of forest across all age class groups. For the years 1 to 5, it accounts for around 40 percent (95,086 hectares) of the total in that age class, and 33 percent (567,478 hectares) across all age classes.

## Species Distribution by age classes

Figure 6: Forest area by age class and species, as at 1 April 2017



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 distribution of Douglas-fir is higher in Otago and Southland (27 percent) and Canterbury (17 percent) compared to the national distribution (6 percent) as growing conditions are more suitable.

Figure 7: Species Distribution 1, as at 1 April 2017

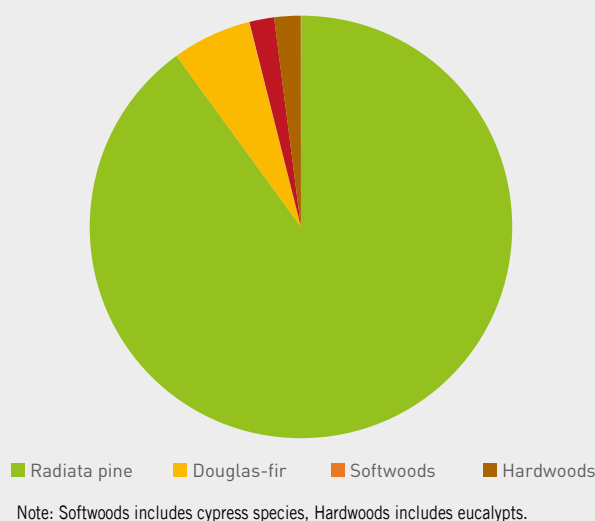


Figure 8: Radiata pine by Tending Regime, as at 1 April 2017

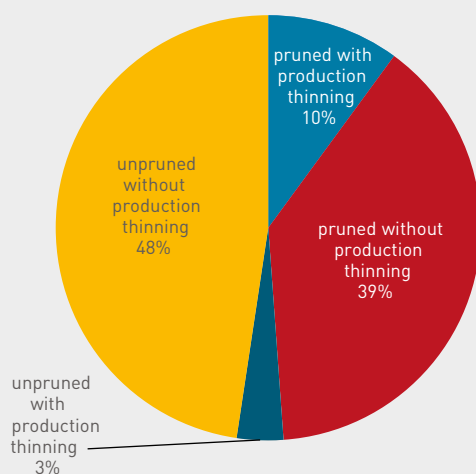
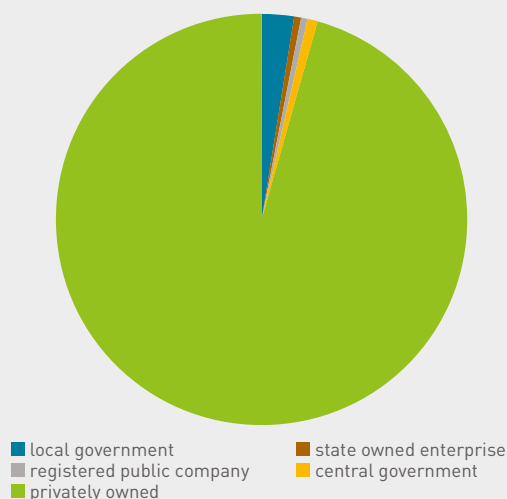


Figure 9: Forest ownership, as at 1 April 2017<sup>1</sup>



## Silviculture

Figure 8 indicates that about 50 percent (750,385 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 slight fall from the previous year, and continuation of the general trend away from pruning.

The area of production thinned forest decreased slightly from last year to approximately 13 percent of the radiata pine planted forest (Figure 8). Generally, the area of production thinned forest has declined over the past decade.

## Standing Volume

The standing volume by Territorial Authority at 1 April 2017 is presented in Table 5 (see Appendix 1 for a definition of standing volume).

## Ownership

In 2017, there were around 1,750 owners with more than 40 hectares of forests. The vast majority (95 percent) owned between 40 and 999 hectares of forest, making up 14 percent of the National Forest Estate in 2017 (Table 6). In contrast, the 5 percent of owners with 1,000 or more hectares accounted for 69 percent of total exotic plantation forest estate in New Zealand.

The number of owners with less than 40 hectares is difficult to estimate, but is likely to be over 10,000. It is estimated these owners represent around 16 percent of total forest area, recognising the lower quality of data for these owners.

1,631,534 hectares, or 96 percent of New Zealand's exotic plantation forests, were privately owned as at 1 April 2017 (Figure 9).

### Note

1. The area of forest owned or managed by major forest owners can be found in the New Zealand Forest Industry booklet, Facts & Figures 2016/17, page 13 (see the New Zealand Forest Owners Association website for more information).
2. Ownership is based solely on the ownership of the forest irrespective of the ownership of the land.
3. Figure represents percentage of net stocked planted production forest area by ownership type.
4. Significant changes in forest ownership have occurred since 2003, resulting in large areas of forest previously owned by public companies now being privately owned.
5. The legal entities included in the "Privately owned" category are private companies, partnerships, individuals and trusts, which includes Maori trusts and incorporations.
6. "Central Government" forests are predominantly Crown-owned forests on Maori lease-hold land. These forests are managed by the Ministry for Primary Industries.



Table 5: Area, standing volume and area-weighted average age by territorial authority as at 1 April 2017

Territorial authority	Area (ha)	standing volume (000 m³)	area-weighted average age (years)
<b>Northland wood supply region</b>			
Far North District	83,547	25,965	17.4
Whangarei District	30,167	8,692	15.9
Kaipara District	34,340	11,322	17.4
Auckland Council	38,814	12,456	17.9
<b>Northland Total</b>	<b>186,868</b>	<b>58,435</b>	<b>17.3</b>
<b>Central North Island wood supply region</b>			
Thames-Coromandel District	23,430	7,001	15.0
Hauraki District	3,412	1,515	18.8
Waikato District	16,648	7,427	19.2
Matamata-Piako District	1,279	525	18.7
Hamilton City	1	1	35.0
Tauranga District	110	60	22.2
Western Bay of Plenty District	22,698	9,020	17.7
Rotorua District	51,659	16,344	16.0
Kawerau District	71	46	23.0
Whakatane District	108,253	33,153	15.4
Opotiki District	16,051	5,570	16.7
Waipa District	2,325	1,071	19.6
Otorohanga District	4,443	2,029	19.8
Waitomo District	24,096	9,555	18.4
Ruapehu District	54,880	21,287	17.3
South Waikato District	61,131	20,751	15.5
Taupo District	176,991	51,543	14.9
<b>Central North Island Total</b>	<b>567,478</b>	<b>186,897</b>	<b>15.9</b>
<b>East Coast wood supply region</b>			
Gisborne District	154,149	55,857	18.5
<b>East Coast Total</b>	<b>154,149</b>	<b>55,857</b>	<b>18.5</b>
<b>Hawke's Bay wood supply region</b>			
Wairoa District	55,313	18,053	17.2
Hastings District	63,179	20,589	16.7
Napier City	78	37	23.3
Central Hawkes Bay District	15,821	6,940	20.8
<b>Hawke's Bay Total</b>	<b>134,391</b>	<b>45,620</b>	<b>17.4</b>
<b>Southern North Island wood supply region</b>			
New Plymouth District	3,904	1,375	20.3
Stratford District	4,993	1,771	19.4
South Taranaki District	9,643	3,925	21.6
Wanganui District	26,967	9,046	19.0
Rangitikei District	20,875	7,309	20.1
Manawatu District	6,681	2,679	21.6
Kapiti Coast District	3,151	1,344	22.2
Upper Hutt City	4,858	1,556	18.4
Porirua City	1,216	610	25.5
Wellington City	574	242	21.5
Lower Hutt City	354	230	31.3
Palmerston North City	2,233	685	17.6
Tararua District	18,330	5,825	18.0
Masterton District	32,027	11,727	20.1
Horowhenua District	6,457	2,314	20.6
Carterton District	9,783	2,788	16.9
South Wairarapa District	9,386	3,059	18.7
<b>Southern North Island Total</b>	<b>161,432</b>	<b>56,487</b>	<b>19.6</b>
<b>North Island Total</b>	<b>1,204,317</b>	<b>403,295</b>	<b>17.1</b>

Territorial authority	Area (ha)	standing volume (000 m³)	area-weighted average age (years)
<b>Nelson and Marlborough wood supply region</b>			
Nelson City	8,994	2,203	15.9
Tasman District	85,013	21,232	16.8
Marlborough District	71,084	20,260	17.6
Kaikoura District	1,140	435	22.8
<b>Nelson and Marlborough Total</b>	<b>166,230</b>	<b>44,131</b>	<b>17.2</b>
<b>West Coast wood supply region</b>			
Buller District	4,765	1,094	19.6
Grey District	13,321	3,107	18.4
Westland District	13,289	2,388	18.1
<b>West Coast Total</b>	<b>31,375</b>	<b>6,589</b>	<b>18.5</b>
<b>Canterbury wood supply region</b>			
Hurunui District	36,710	8,120	18.7
Waimakariri District	8,423	2,081	19.9
Christchurch City	9,970	2,317	21.6
Selwyn District	9,532	2,490	21.3
Ashburton District	3,011	629	19.7
Timaru District	11,622	2,416	20.3
Mackenzie District	4,806	1,201	23.8
Waimate District	11,690	2,444	20.0
<b>Canterbury Total</b>	<b>95,763</b>	<b>21,698</b>	<b>20.0</b>
<b>Otago and Southland wood supply region</b>			
Waitaki District	20,370	4,560	18.2
Dunedin City	15,532	3,449	16.3
Queenstown-Lakes District	738	304	29.8
Central Otago District	7,129	1,436	21.2
Clutha District	82,657	17,246	17.6
Gore District	4,241	1,041	20.9
Southland District	77,899	15,473	17.7
Invercargill City	179	66	23.6
<b>Otago and Southland Total</b>	<b>208,744</b>	<b>43,575</b>	<b>17.8</b>
<b>South Island Total</b>	<b>502,112</b>	<b>115,993</b>	<b>18.1</b>
<b>New Zealand Total</b>	<b>1,706,429</b>	<b>519,289</b>	<b>17.4</b>

Table 6: Total area represented by each data source in the 2017 NEFD database

Data source	Net stocked area(000 ha)	Proportion of total area [%] <sup>1</sup>	Number of owners at national level
<b>Data collected in the NEFD survey</b>			
10,000 hectares+	942	55	23
1,000-9,999 hectares	243	14	73
40-999 hectares	241	14	1,647
<b>NEFD Survey total<sup>1</sup></b>	<b>1,426</b>	<b>84</b>	<b>1,743</b>
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	
<b>Total</b>	<b>1,706</b>	<b>100</b>	

**Notes**

1. Data collected from 2017 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 the NEFD Technical Report.
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 2017<sup>1</sup>

Wood Supply Region	40-99 ha	100-499 ha	500-999 ha	1000-9999 ha	10,000+ ha
Northland	115	76	14	14	3
Central North Island	109	98	18	24	9
East Coast	40	46	7	17	6
Hawke's Bay	56	39	5	8	10
Southern North Island	202	157	15	17	6
Nelson and Marlborough	170	107	7	13	4
West Coast	7	4	1	3	1
Canterbury	77	71	4	9	3
Otago and Southland	139	79	9	14	8
<b>New Zealand total</b>	<b>915</b>	<b>677</b>	<b>80</b>	<b>119</b>	<b>50</b>

**Notes**

1. 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.
2. 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.

Table 8: Forest area by forest owner national size class, as at 1 April 2017

Wood Supply Region	< 40 ha	40-99 ha	100-499 ha	500-999 ha	1000-9999 ha	10,000+ ha	Total ha
Northland	35,423	7,327	13,932	9,654	40,866	79,666	186,868
Central North Island	57,456	6,620	19,485	10,901	64,607	408,409	567,478
East Coast	16,876	2,443	11,060	5,830	35,233	82,708	154,149
Hawke's Bay	21,929	3,326	7,700	3,566	11,543	86,327	134,391
Southern North Island	44,957	12,493	30,141	9,310	21,548	42,983	161,432
Nelson and Marlborough	24,769	10,519	18,905	4,781	25,265	81,991	166,230
West Coast	2,781	413	612	617	1,890	25,062	31,375
Canterbury	32,687	4,851	12,954	2,117	9,326	33,828	95,763
Otago and Southland	43,193	8,764	16,438	6,502	32,415	101,432	208,744
<b>New Zealand total</b>	<b>280,070</b>	<b>56,756</b>	<b>131,226</b>	<b>53,277</b>	<b>242,694</b>	<b>942,406</b>	<b>1,706,429</b>



# Harvesting for forest 40+ hectares

An estimated harvesting volume of 24.5 million cubic metres for the year ended March 2017 came from clear felling 45,000 hectares of planted forest, with an additional 0.33 million cubic metres from production thinning. The area harvested is very similar to 2016, and sits within recent harvesting trends (Figure 10).

Figure 10: Historical area harvested 1990 – 2017

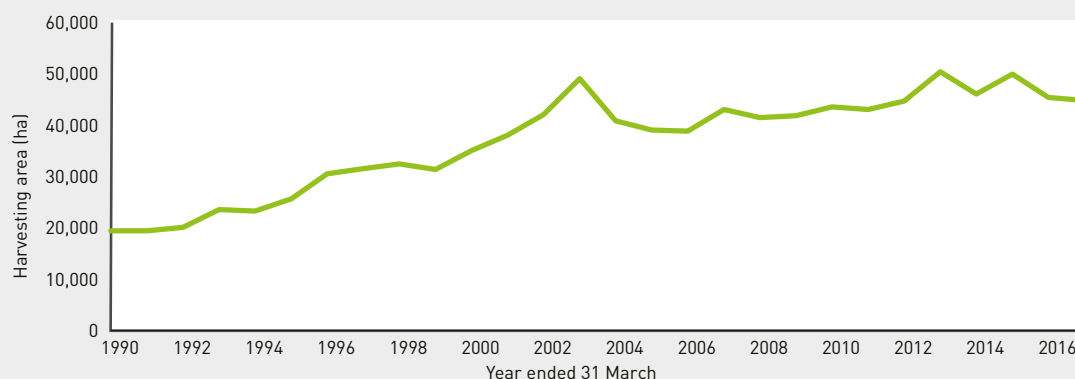
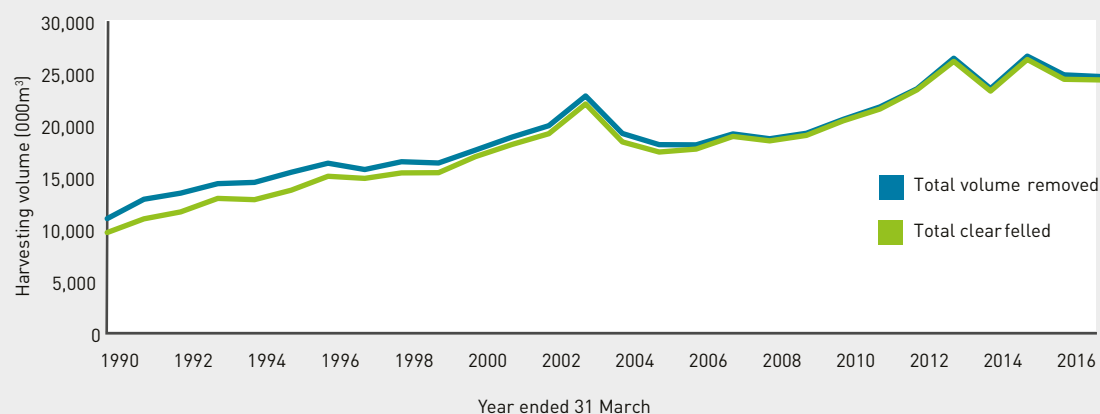


Figure 11 shows the harvest volume trend from 1990 to present. The level of harvest from production thinning shows a continued reduction due to fewer forests being production thinned.

Figure 11: Historical harvesting volume 1990 – 2017<sup>1</sup>



Note

1. 'Total clear felled' is the volume of wood removed excluding thinnings.

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 2016 to 28.4 years in the year ended 31 March 2017.

Of the radiata pine harvest, the proportion of pulp and chip logs has slightly decreased from 18 to 16 percent over the past year. Approximately 12 percent was sold as pruned logs. Unpruned logs make up the balance of 71 percent, a marginal increase of 2 percentage points from 2016.

## An estimate of total harvest volumes for New Zealand

Along with NEFD harvest figures produced, the Ministry for Primary Industries also publishes Forestry Production Statistics (FPS) quarterly and annually on MPI's website. These statistics, obtained from New Zealand wood processors, report on production and stock levels of various wood products and total roundwood removal. For the year ending March 2017, the total planted production forest removals was 30.6 million cubic metres of Roundwood (see Figure 12).

The differences between FPS and the NEFD are likely to be due to a number of different reasons, sawmill returns, conversion factors and the NEFD only including harvest volume from forest 40 hectares or greater in size are likely to contribute. Work to reconcile these differences is being planned.

## Deforestation Intentions Survey

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 MPI's website: <http://www.mpi.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 MPI website: <http://www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>

Figure 12: Total planted production forest Roundwood removals





# Planting

The estimate of total planting to December 2016 is 43,100 hectares, the same as the previous year. The total is made up of 2,500 hectares of new planting (figure 13) and 40,600 hectares of replanting. The planting estimates are based on data collected from forest owners in the 2017 NEFD survey, and scaled up as 2017 is a sample year. The scaling approach is detailed in the NEFD technical report in Appendix 5.

The new planting to December 2017 is estimated at 4,300 hectares, based on a survey of large forest owners and the amount established by smaller forest owners under MPI forestry schemes (figure 14). This value will be finalised in the 2018 NEFD report.

More detail on new planting since 1920 is provided below in Table 9 and Figure 14.

Figure 13: Total planted area, year ending 31 December

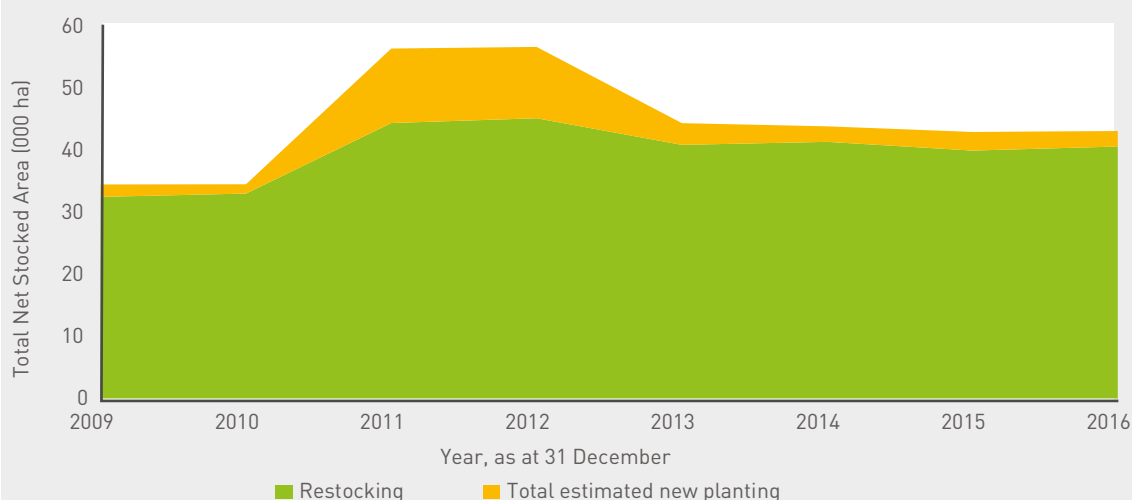
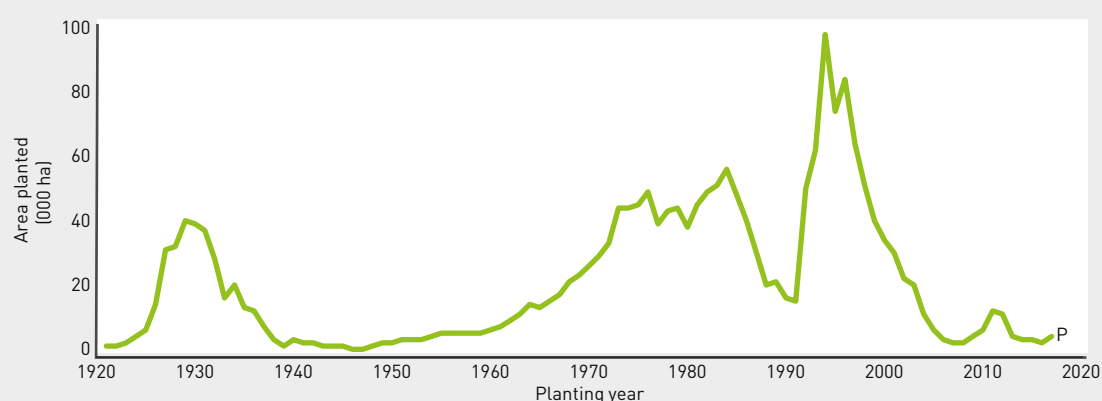


Figure 14: New Land Planted in Production Forest in New Zealand



## Sources

Until 1987, the statistics were compiled by the New Zealand Forest Service. The figures for 1988 to 1991 are estimates from NEFD surveys. The figures from 1992 onwards are based on nursery surveys undertaken by the Ministry for Primary Industries and predecessor agencies which are reviewed when NEFD survey data are received and revised as appropriate.

## Note

1. The 2016 figure is compiled from new planting reported in the 2017 NEFD survey. The new planting estimate released in the National Exotic Forest Description may differ from those produced in the Agricultural Production Survey by Statistics New Zealand. These surveys use different survey frames and designs.
2. This 2017 provisional estimate is based on information collected from the '2017 New Planting Survey' of selected large forest owners and managers, and known afforesters. This survey asks for estimates of planting during the 2017 calendar year. The estimates will be finalised in the 2018 NEFD report.

Table 9: New land planted in production forest in New Zealand<sup>1</sup>

Year ended 31 December	New land planted (000 ha)	Year ended 31 December	New land planted (000 ha)	Year ended 31 December	New land planted (000 ha)
1921	1	1954	4	1987	30
1922	1	1955	5	1988	20
1923	2	1956	5	1989	21
1924	4	1957	5	1990	16
1925	6	1958	5	1991	15
1926	14	1959	5	1992	50
1927	31	1960	6	1993	62
1928	32	1961	7	1994	98
1929	40	1962	9	1995	74
1930	39	1963	11	1996	84
1931	37	1964	14	1997	64
1932	28	1965	13	1998	51
1933	16	1966	15	1999	40
1934	20	1967	17	2000	34
1935	13	1968	21	2001	30
1936	12	1969	23	2002	22
1937	7	1970	26	2003	20
1938	3	1971	29	2004	11
1939	1	1972	33	2005	6
1940	3	1973	44	2006	3
1941	2	1974	44	2007	2
1942	2	1975	45	2008	2
1943	1	1976	49	2009	4
1944	1	1977	39	2010	6
1945	1	1978	43	2011	12
1946	0	1979	44	2012	11
1947	0	1980	38	2013	4
1948	1	1981	45	2014	3
1949	2	1982	49	2015	3
1950	2	1983	51	2016 <sup>2</sup>	2
1951	3	1984	56	2017 <sup>3</sup>	4
1952	3	1985	48		
1953	3	1986	40		

#### Sources

Until 1987, the statistics were compiled by the New Zealand Forest Service. The figures for 1988 to 1991 are estimates from NEFD surveys. The figures from 1992 onwards are based on nursery surveys undertaken by the Ministry of Forestry and the Ministry of Agriculture and Forestry.

#### Notes

1. New planting numbers from 1921 to 1950 have been revised, following the addition of information from Statistics of the Forests and Forest Industries of New Zealand to 1974. The areas of new planted forests have been estimated independently from total planted forest areas shown in Table 9.
2. This figure is compiled from new planting reported in the 2017 NEFD survey. The new planting estimate released in the National Exotic Forest Description may differ from those produced in the Agricultural Production Survey by Statistics New Zealand. These surveys use different survey frames and designs.
3. This provisional estimate is based on information collected from the 2017 New Planting Survey of selected large forest owners and managers, and known afforesters. This survey asks for estimates of planting during the 2016 calendar year which be finalised in the 2018 NEFD report.

#### Symbols

F Finalised.  
P Provisional.

The estimated total planted area of known radiata pine increased by 3,000 hectares between 2016 and 2017. The increase was due to capturing existing forest through updated returns from some larger owners. Douglas-fir decreased in area by 450 hectares. All other species, with the exception of other hardwoods, showed minor decreases in area consistent with year-on-year variation.

Approximately 48,500 hectares of previously harvested forest were awaiting either replanting or a land use decision as at 1 April 2017 (Figure 15). This is a decrease of around 2,000 hectares on the previous year.

The land cover prior to new planting is presented in Table 10. 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.

Table 10: Land cover prior to new planting, year ending December

Calendar years	Improved pasture (%)	Unimproved pasture (%)	Other Woody Vegetation (%)	Area of new planting [ha]
1993	28	56	16	61,600
1994	49	35	16	98,200
1995	67	22	11	73,900
1996	36	50	14	83,600
1997	43	46	11	63,700
1998	44	47	9	51,200
1999	56	30	14	40,000
2000	52	31	17	33,600
2001	68	9	23	30,100
2002	31	49	20	22,100
2003	28	46	26	19,900
2004	18	46	36	10,600
2005	2	19	79	6,000
2006	2	35	63	2,600
2007	11	9	80	2,400
2008	57	2	41	1,900
2009	27	58	15	4,300
2010	64	29	6	6,000
2011	42	53	5	12,000
2012	61	32	7	11,000
2013	33	43	24	3,500
2014	13	79	8	2,500
2015	30	43	27	3,000
2016	1	63	36	2,500

Note:

1. 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

Figure 15: harvested forest awaiting either replanting or a land use decision as at 1 April 2017

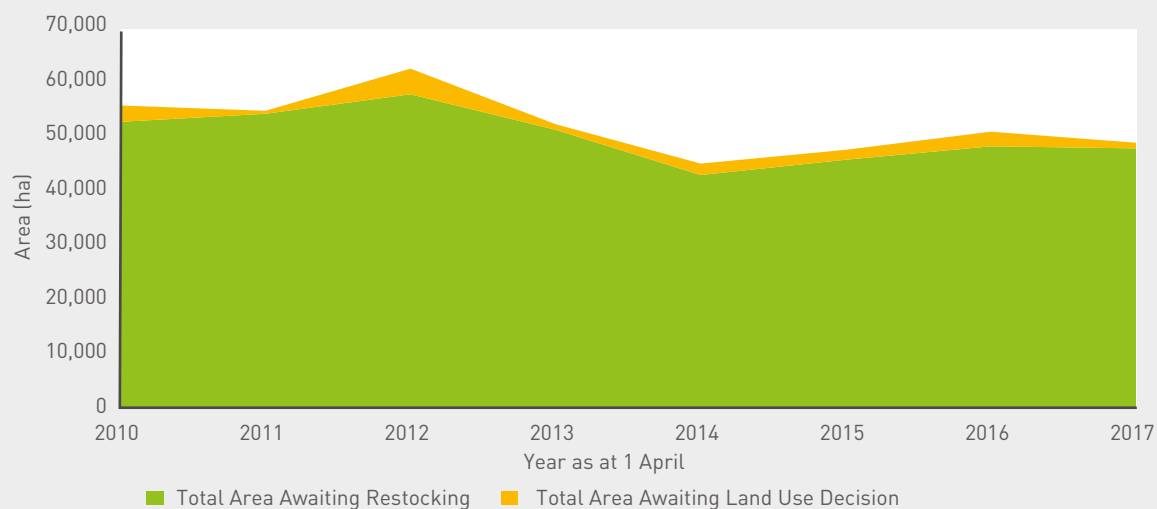


Table 11: New planting, split by survey data and adjusted data, year ending December

Calendar year of planting (ha)	Total new planting <sup>1</sup>	New planting collected in postal surveys <sup>2</sup>	New planting adjustments <sup>3</sup>
1992	50,200	30,900	19,300
1993	61,600	40,400	21,200
1994	98,200	68,400	29,800
1995	73,900	56,200	17,700
1996	83,600	64,600	19,000
1997	63,700	45,600	18,100
1998	51,200	36,300	14,900
1999	40,000	23,700	16,300
2000	33,600	24,700	8,900
2001	30,100	17,100	13,000
2002	22,100	14,300	7,800
2003	19,900	11,800	8,100
2004	10,600	6,200	4,400
2005	6,000	2,900	3,100
2006	2,600	1,500	1,100
2007	2,400	2,400	–
2008	1,900	1,900	–
2009	4,300	4,300	–
2010	6,000	6,000	–
2011	12,000	12,000	–
2012	11,000	11,000	–
2013	3,500	3,500	–
2014	2,500	2,500	–
2015	3,000	3,000	–
2016	2,500	2,500	–

**Notes**

1. As estimated from the nursery surveys undertaken by the Ministry for Primary Industries.
2. The area of new planting as collected in postal surveys. This does not include the area of restocking.
3. The difference between total new planting and new planting collected in postal surveys.

## 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 MPI's website:  
<https://www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>









# Forest area by age class and wood supply region

The following presents tabular area by region for all New Zealand plantation species: radiata pine, Douglas-fir, cypress species, other softwoods, eucalypt species, and other hardwoods.





Table 12: Area planted in all species by territorial authority, as at 1 April 2017

	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	14,141	12,493	9,824	10,302	18,513	7,653	8,601	1,445	495	37	43	83,547
Whangarei District	6,925	3,660	3,271	5,357	6,810	1,705	1,686	393	323	14	22	30,167
Kaipara District	6,860	2,966	2,781	6,205	9,249	4,600	1,274	173	183	25	24	34,340
Auckland Council	2,300	4,921	7,642	9,070	11,228	1,170	805	1,195	387	69	27	38,814
Region total	30,226	24,040	23,518	30,935	45,801	15,128	12,366	3,206	1,388	145	116	186,868
Central North Island wood supply region												
Thames-Coromandel District	4,143	5,068	4,428	3,379	3,765	429	1,275	618	237	18	70	23,430
Hauraki District	322	256	282	752	1,526	202	26	26	14	0	6	3,412
Waikato District	1,003	1,097	1,637	5,015	6,063	1,170	390	112	53	19	90	16,648
Matamata-Piako District	110	259	113	156	447	70	34	82	5	0	3	1,279
Hamilton City	0	0	0	0	0	0	1	0	0	0	0	1
Tauranga District	0	0	12	33	42	17	6	0	0	0	0	110
Western Bay of Plenty District	2,832	2,079	3,335	4,761	6,254	2,490	487	162	203	78	17	22,698
Rotorua District	6,962	7,748	9,783	11,676	9,020	4,538	687	582	432	45	186	51,659
Kawerau District	0	0	0	20	14	37	0	0	0	0	0	71
Whakatane District	17,827	18,757	13,767	25,163	22,059	7,227	2,196	971	203	55	28	108,253
Opotiki District	4,521	2,553	996	1,443	1,083	1,719	3,335	376	25	0	0	16,051
Waipa District	66	177	176	852	866	88	39	55	3	0	3	2,325
Otorohanga District	132	9	974	1,089	1,852	200	138	37	10	0	2	4,443
Waitomo District	300	3,466	3,379	6,114	9,247	772	389	122	280	18	9	24,096
Ruapehu District	10,093	4,401	3,577	14,250	14,821	4,375	2,437	814	81	1	30	54,880
South Waikato District	9,314	7,276	12,293	14,661	12,227	4,999	134	46	50	4	127	61,131
Taupo District	37,461	25,921	32,706	32,402	21,338	18,165	6,880	989	747	324	59	176,991
Region total	95,086	79,066	87,458	121,766	110,624	46,498	18,454	4,992	2,343	562	630	567,478
East Coast wood supply region												
Gisborne District	20,099	15,901	13,360	31,071	47,663	12,732	7,978	3,427	1,430	455	33	154,149
Region total	20,099	15,901	13,360	31,071	47,663	12,732	7,978	3,427	1,430	455	33	154,149
Hawke's Bay wood supply region												
Wairoa District	5,325	7,719	8,862	8,679	21,453	1,091	1,533	381	162	84	23	55,313
Hastings District	7,217	8,683	10,511	11,776	18,865	4,449	1,005	385	216	41	31	63,179
Napier City	0	0	0	0	66	0	12	0	0	0	0	78
Central Hawke's Bay District	600	864	1,207	5,479	5,404	985	664	321	197	47	53	15,821
Region total	13,142	17,266	20,580	25,934	45,788	6,525	3,214	1,087	575	172	107	134,391
Southern North Island wood supply region												
New Plymouth District	92	358	322	1,202	1,304	331	155	92	45	1	2	3,904
Stratford District	893	9	276	355	2,844	517	55	35	6	0	3	4,993
South Taranaki District	253	445	691	2,543	3,899	1,061	390	276	73	3	9	9,643
Wanganui District	2,264	2,131	3,189	4,478	11,823	2,306	452	155	128	25	17	26,967
Rangitikei District	1,098	1,131	2,080	6,860	7,118	1,053	650	354	332	178	22	20,875
Manawatu District	487	208	568	1,027	3,101	447	406	314	100	8	15	6,681
Kapiti Coast District	99	63	253	776	1,215	287	399	54	5	0	0	3,151
Upper Hutt City	763	563	604	984	879	447	306	141	112	29	31	4,858
Porirua City	10	3	130	57	437	328	171	11	69	0	0	1,216
Wellington City	0	68	8	80	291	98	27	2	0	0	0	574
Lower Hutt City	0	0	0	22	90	2	107	113	20	0	0	354
Palmerston North City	288	584	216	142	668	77	40	146	72	0	0	2,233
Tararua District	3,017	1,898	1,246	3,249	6,557	669	1,018	400	240	27	9	18,330
Masterton District	2,629	2,422	3,370	5,578	12,058	2,189	2,714	435	456	152	26	32,027
Horowhenua District	231	645	1,070	776	2,556	566	317	157	73	38	29	6,457
Carterton District	1,547	1,059	805	3,129	2,110	661	158	151	122	40	1	9,783
South Wairarapa District	1,260	604	979	2,250	2,782	860	267	247	126	10	1	9,386
Region total	14,929	12,192	15,806	33,507	59,731	11,899	7,631	3,082	1,979	511	165	161,432
North Island total	173,483	148,465	160,722	243,212	309,606	92,781	49,642	15,795	7,716	1,845	1,052	1,204,317

	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	974	2,255	1,433	1,510	1,799	526	143	242	80	18	14	8,994
Tasman District	9,707	14,159	15,435	13,847	20,943	5,359	2,795	1,811	732	142	83	85,013
Marlborough District	11,773	7,224	7,420	10,878	23,863	3,586	4,336	1,316	557	114	18	71,084
Kaikoura District	31	28	47	191	682	16	24	56	38	26	0	1,140
Region total	22,485	23,666	24,336	26,426	47,286	9,487	7,298	3,425	1,407	300	115	166,230
West Coast wood supply region												
Buller District	795	809	298	295	1,221	319	258	657	72	17	24	4,765
Grey District	1,798	1,758	2,907	2,432	1,578	319	1,253	494	546	233	3	13,321
Westland District	770	1,863	2,891	2,762	2,935	560	886	273	307	39	3	13,289
Region total	3,363	4,430	6,096	5,489	5,734	1,198	2,397	1,424	925	289	30	31,375
Canterbury wood supply region												
Hurunui District	2,906	3,182	6,854	8,816	9,312	2,414	1,639	948	416	117	106	36,710
Waimakariri District	616	675	759	1,637	3,614	672	189	74	113	74	2	8,423
Christchurch City	571	327	752	1,652	5,161	534	586	259	82	5	39	9,970
Selwyn District	919	618	443	1,340	3,331	1,678	759	196	206	21	22	9,532
Ashburton District	319	399	353	508	807	219	155	55	124	46	26	3,011
Timaru District	756	511	2,543	2,108	3,031	1,454	458	416	278	26	41	11,622
Mackenzie District	83	330	410	923	1,801	328	283	225	245	142	35	4,806
Waimate District	837	772	815	3,371	4,119	579	751	322	47	50	27	11,690
Region total	7,007	6,813	12,929	20,355	31,176	7,878	4,821	2,495	1,511	481	298	95,763
Otago and Southland wood supply region												
Waitaki District	3,002	807	2,582	6,370	5,165	1,017	886	328	147	45	22	20,370
Dunedin City	4,185	2,346	712	1,446	3,775	998	1,493	418	101	18	40	15,532
Queenstown-Lakes District	0	3	14	71	188	137	180	103	7	28	7	738
Central Otago District	432	419	526	2,654	1,735	210	401	278	319	98	57	7,129
Clutha District	8,670	8,232	12,975	22,998	20,300	4,218	3,223	1,445	351	135	110	82,657
Gore District	0	107	68	2,363	1,414	113	50	64	47	15	0	4,241
Southland District	7,693	6,343	11,914	24,690	19,277	3,022	2,468	1,814	607	53	18	77,899
Invercargill City	0	0	13	20	104	25	8	9	0	0	0	179
Region total	23,982	18,257	28,804	60,611	51,958	9,741	8,708	4,459	1,579	392	254	208,744
South Island total	56,837	53,166	72,164	112,881	136,154	28,303	23,224	11,803	5,423	1,462	697	502,112
New Zealand total	230,319	201,630	232,886	356,093	445,760	121,084	72,866	27,598	13,138	3,307	1,749	1,706,429

Figure 16: Distribution of all species forest area by age class and island, as at 1 April 2017

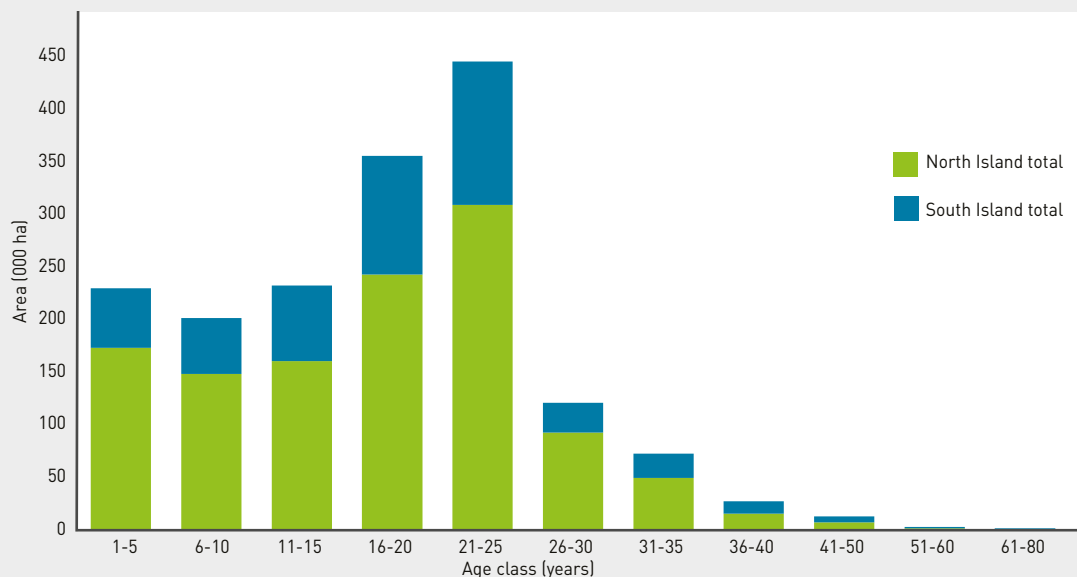


Table 13: Area planted in radiata pine by territorial authority, as at 1 April 2017

	Radiata pine											Total [ha]
	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]	61-80 Years [ha]	
Northland wood supply region												
Far North District	14,129	12,481	9,586	9,781	18,274	7,575	8,351	1,295	462	15	0	81,949
Whangarei District	6,921	3,658	3,252	5,155	6,529	1,658	1,664	307	317	2	3	29,467
Kaipara District	6,858	2,966	2,704	5,924	9,004	4,531	1,258	158	154	24	6	33,587
Auckland Council	2,297	4,868	7,499	8,823	10,838	1,073	682	1,117	313	44	14	37,568
Region total	30,205	23,973	23,041	29,684	44,646	14,837	11,955	2,877	1,246	85	23	182,571
Central North Island wood supply region												
Thames-Coromandel District	4,141	5,068	4,420	3,372	3,699	425	1,223	554	211	16	23	23,152
Hauraki District	318	165	267	725	1,509	202	22	26	6	0	0	3,240
Waikato District	1,001	1,088	1,560	4,945	6,004	1,129	369	111	38	17	54	16,315
Matamata-Piako District	109	259	110	129	429	67	32	82	5	0	0	1,222
Hamilton City	0	0	0	0	0	0	1	0	0	0	0	1
Tauranga District	0	0	10	26	40	16	5	0	0	0	0	97
Western Bay of Plenty District	2,816	2,029	3,222	4,463	6,054	2,451	399	130	185	2	3	21,754
Rotorua District	6,813	7,670	9,555	10,915	8,419	4,048	344	245	43	1	15	48,068
Kawerau District	0	0	0	0	0	37	0	0	0	0	0	37
Whakatane District	17,812	18,746	13,328	24,095	20,750	5,973	737	457	40	2	9	101,949
Opotiki District	4,517	2,526	992	1,428	1,075	1,712	3,327	374	25	0	0	15,976
Waipa District	66	177	135	692	798	84	36	45	3	0	2	2,038
Otorohanga District	132	9	926	1,021	1,786	166	98	37	6	0	0	4,181
Waitomo District	300	2,220	3,032	5,919	8,921	768	376	116	11	0	0	21,663
Ruapehu District	9,389	4,277	3,464	13,870	14,598	4,366	2,407	723	29	1	0	53,124
South Waikato District	7,460	6,648	11,619	14,245	12,160	4,825	107	41	38	0	77	57,220
Taupo District	36,674	24,734	31,318	31,143	20,530	16,613	5,989	293	37	55	24	167,409
Region total	91,548	75,615	83,958	116,988	106,772	42,882	15,472	3,234	677	94	207	537,446
East Coast wood supply region												
Gisborne District	19,543	14,855	12,911	30,327	47,124	12,597	7,744	3,151	988	24	8	149,270
Region total	19,543	14,855	12,911	30,327	47,124	12,597	7,744	3,151	988	24	8	149,270
Hawke's Bay wood supply region												
Wairoa District	4,980	7,477	8,569	8,502	21,396	1,091	1,513	346	113	1	5	53,993
Hastings District	7,116	7,858	10,425	11,647	18,650	4,410	898	337	161	24	12	61,538
Napier City	0	0	0	0	60	0	8	0	0	0	0	68
Central Hawke's Bay District	593	736	1,175	5,405	5,357	943	584	317	175	17	6	15,308
Region total	12,689	16,071	20,169	25,554	45,463	6,444	3,003	1,000	449	42	23	130,907
Southern North Island wood supply region												
New Plymouth District	60	200	221	813	1,262	316	148	85	42	1	0	3,148
Stratford District	425	0	262	337	2,785	516	48	35	4	0	1	4,413
South Taranaki District	252	135	661	2,485	3,848	1,045	389	272	73	3	6	9,169
Wanganui District	2,244	2,118	3,001	4,355	11,722	2,294	419	129	80	2	10	26,373
Rangitikei District	950	801	1,698	6,619	6,968	990	619	318	257	99	2	19,320
Manawatu District	484	208	537	944	3,047	422	346	291	97	6	5	6,387
Kapiti Coast District	99	63	249	747	1,187	285	399	53	5	0	0	3,087
Upper Hutt City	763	561	601	971	868	430	261	117	107	9	31	4,718
Porirua City	10	3	130	57	431	328	169	11	69	0	0	1,208
Wellington City	0	68	8	80	291	98	27	2	0	0	0	574
Lower Hutt City	0	0	0	22	88	0	107	113	20	0	0	350
Palmerston North City	228	572	208	141	615	76	40	146	72	0	0	2,098
Tararua District	3,013	1,611	1,226	3,191	6,538	663	745	385	229	24	7	17,632
Masterton District	2,565	2,376	3,290	5,498	11,970	2,155	2,644	411	370	98	10	31,387
Horowhenua District	227	639	1,057	765	2,480	538	296	155	69	35	15	6,275
Carterton District	1,505	1,059	800	3,091	2,103	644	152	141	103	2	1	9,601
South Wairarapa District	1,260	604	969	2,230	2,747	805	248	130	108	5	1	9,107
Region total	14,083	11,019	14,918	32,346	58,949	11,605	7,055	2,794	1,705	284	89	154,846
North Island total	168,067	141,533	154,997	234,897	302,953	88,365	45,229	13,056	5,065	529	350	1,155,039



	Radiata pine											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	973	2,247	1,426	1,470	1,759	520	61	61	14	1	0	8,532
Tasman District	9,703	14,019	15,085	13,005	18,825	4,298	1,296	690	358	51	15	77,345
Marlborough District	11,703	7,106	7,193	10,300	23,447	3,490	3,664	923	468	100	2	68,396
Kaikoura District	24	23	39	174	672	16	22	51	9	2	0	1,032
Region total	22,403	23,395	23,744	24,949	44,703	8,324	5,043	1,725	849	154	17	155,305
West Coast wood supply region												
Buller District	712	565	167	164	1,158	317	82	124	27	0	0	3,316
Grey District	1,711	1,520	2,715	2,095	1,542	303	1,057	333	165	69	0	11,510
Westland District	770	1,327	1,183	1,333	1,606	54	55	181	294	1	0	6,804
Region total	3,193	3,412	4,065	3,592	4,306	674	1,194	638	486	70	0	21,630
Canterbury wood supply region												
Hurunui District	2,384	2,219	4,979	7,913	8,259	2,203	914	365	184	102	6	29,528
Waimakariri District	518	647	713	1,577	3,352	620	178	41	31	68	2	7,745
Christchurch City	571	327	540	1,242	3,448	460	502	230	75	2	23	7,422
Selwyn District	907	618	418	1,148	2,728	1,279	539	182	97	16	1	7,931
Ashburton District	319	378	293	355	659	106	94	40	72	8	20	2,344
Timaru District	435	308	383	664	2,610	1,249	328	53	45	4	0	6,079
Mackenzie District	52	161	98	316	1,223	144	103	69	77	20	0	2,263
Waimate District	741	748	561	1,775	2,518	508	493	201	35	23	14	7,617
Region total	5,926	5,405	7,985	14,990	24,797	6,569	3,152	1,181	616	243	66	70,929
Otago and Southland wood supply region												
Waitaki District	2,896	578	2,420	2,984	4,583	931	748	227	140	32	13	15,551
Dunedin City	4,101	2,288	663	1,196	3,478	830	840	130	24	13	1	13,564
Queenstown-Lakes District	0	0	10	14	46	22	37	80	1	23	7	240
Central Otago District	0	5	193	205	1,000	59	213	97	44	4	50	1,870
Clutha District	5,638	5,347	8,886	13,296	17,782	3,597	1,448	504	222	25	8	56,753
Gore District	0	6	40	695	1,201	66	50	61	45	1	0	2,165
Southland District	4,277	4,082	5,859	10,712	12,731	1,914	1,488	704	498	22	2	42,289
Invercargill City	0	0	13	20	101	25	8	9	0	0	0	176
Region total	16,912	12,306	18,084	29,121	40,922	7,444	4,831	1,812	974	120	81	132,607
South Island total	48,434	44,518	53,878	72,653	114,728	23,011	14,220	5,356	2,925	587	164	380,472
New Zealand total	216,501	186,050	208,874	307,549	417,680	111,375	59,449	18,412	7,990	1,116	514	1,535,510

Figure 17: Distribution of radiata pine forest area by age class and island, as at 1 April 2017

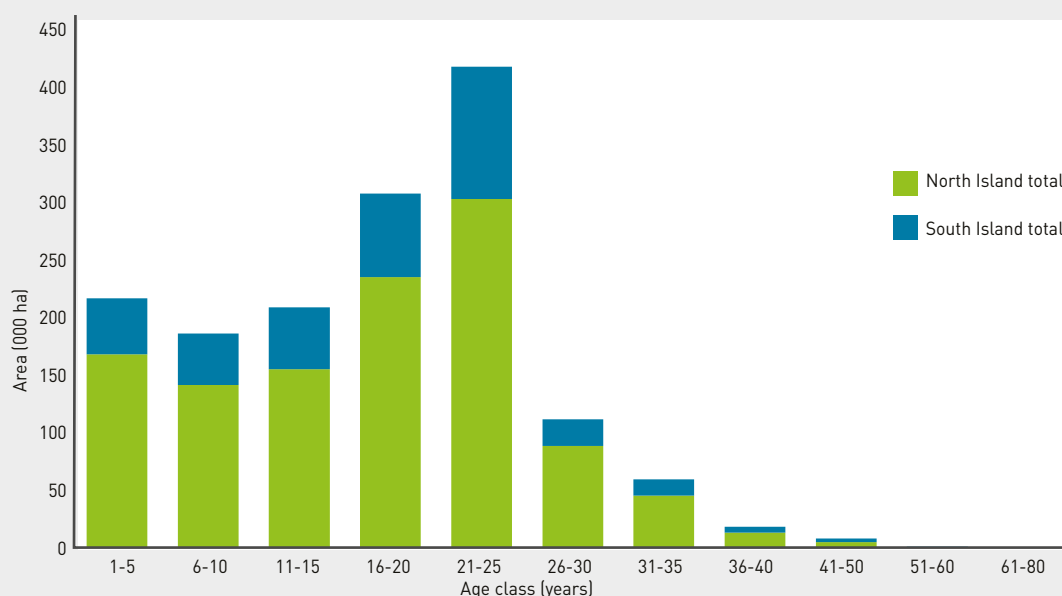


Table 14: Area planted in Douglas-fir by territorial authority, as at 1 April 2017

	Douglas-fir											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	0	0	0	0	2	0	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	0	0	0	6	0	0	0	0	0	0	6
Region total	0	0	0	0	8	0	0	0	2	0	0	10
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	0	10	0	0	0	0	0	0	10
Hauraki District	0	8	0	0	0	0	0	0	0	0	0	8
Waikato District	0	0	0	0	1	0	1	0	0	0	0	2
Matamata-Piako District	0	0	0	4	0	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	3	5	8	0	1	2	18	2	0	39
Rotorua District	0	0	14	439	309	424	117	298	341	30	113	2,085
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	10	182	829	1,143	1,201	1,396	495	158	32	9	5,455
Opotiki District	0	19	0	0	0	0	0	0	0	0	0	19
Waipa District	0	0	0	2	1	0	0	0	0	0	0	3
Otorohanga District	0	0	36	52	25	1	0	0	1	0	0	115
Waitomo District	0	1,184	341	143	234	0	0	2	263	4	0	2,171
Ruapehu District	286	119	91	184	60	0	2	13	40	0	1	796
South Waikato District	0	74	364	7	9	0	0	0	5	2	7	468
Taupo District	184	105	1,088	993	203	1,528	806	649	595	39	9	6,199
Region total	470	1,519	2,119	2,658	2,003	3,154	2,323	1,459	1,421	109	139	17,374
East Coast wood supply region												
Gisborne District	200	264	336	558	297	0	1	3	350	161	0	2,170
Region total	200	264	336	558	297	0	1	3	350	161	0	2,170
Hawke's Bay wood supply region												
Wairoa District	45	0	C	C	1	0	0	C	45	33	3	167
Hastings District	2	0	14	C	121	0	17	C	26	14	1	229
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawke's Bay District	0	0	C	C	2	22	0	1	0	11	2	50
Region total	47	0	40	44	124	22	17	17	71	58	6	446
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	1	1	0	0	0	0	1	0	0	3
South Taranaki District	0	0	0	0	0	0	0	1	0	0	0	1
Wanganui District	0	8	2	13	10	4	12	3	19	16	0	87
Rangitikei District	0	150	4	55	52	0	1	8	4	8	1	283
Manawatu District	0	0	2	5	0	3	7	2	1	0	0	20
Kapiti Coast District	0	0	0	3	0	0	0	0	0	0	0	3
Upper Hutt City	0	0	2	9	1	3	0	0	3	2	0	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	21	1	0	0	0	0	0	0	0	0	0	23
Tararua District	0	0	5	18	0	0	1	0	10	0	0	34
Masterton District	2	1	6	10	4	0	0	1	82	9	12	127
Horowhenua District	0	0	0	0	0	1	0	0	0	0	0	1
Carterton District	0	0	1	23	0	1	0	0	0	0	0	25
South Wairarapa District	0	0	0	0	0	0	1	0	0	0	0	1
Region total	23	161	23	137	67	12	22	15	120	35	13	628
North Island total	740	1,944	2,517	3,397	2,499	3,188	2,363	1,494	1,964	363	159	20,628

	Douglas-fir											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	C	4	30	29	0	82	136	42	6	C	339
Tasman District	0	103	200	691	1,775	969	1,209	752	202	48	26	5,975
Marlborough District	4	C	80	356	169	27	569	286	56	12	C	1,605
Kaikoura District	7	5	0	10	10	0	1	0	29	24	0	86
Region total	11	159	284	1,087	1,983	996	1,861	1,174	329	90	31	8,005
West Coast wood supply region												
Buller District	83	244	130	123	20	2	0	42	3	0	1	648
Grey District	87	126	112	246	2	0	10	48	198	51	2	882
Westland District	0	0	0	7	4	0	0	13	2	9	0	35
Region total	170	370	242	376	26	2	10	103	203	60	3	1,565
Canterbury wood supply region												
Hurunui District	510	375	1,104	813	966	200	372	367	21	2	8	4,738
Waimakariri District	81	21	32	39	26	6	7	29	70	5	0	316
Christchurch City	0	0	0	84	50	23	17	12	3	0	0	189
Selwyn District	C	0	17	118	413	339	180	C	101	C	21	1,215
Ashburton District	0	21	39	88	85	35	40	15	52	8	2	385
Timaru District	321	187	2,111	1,367	77	89	11	360	224	12	29	4,788
Mackenzie District	C	145	304	571	273	112	37	C	12	C	0	1,579
Waimate District	43	10	190	1,441	1,473	32	75	34	8	15	12	3,333
Region total	987	759	3,797	4,521	3,363	836	739	926	491	52	72	16,542
Otago and Southland wood supply region												
Waitaki District	C	101	134	3,279	387	19	80	72	4	C	0	4,098
Dunedin City	C	54	24	232	125	74	577	254	76	C	13	1,443
Queenstown-Lakes District	0	0	4	51	120	112	133	23	6	2	0	451
Central Otago District	155	361	265	2,241	166	47	90	40	55	1	0	3,421
Clutha District	2,737	2,605	3,740	8,521	2,086	459	1,369	771	91	72	12	22,463
Gore District	0	0	25	1,144	69	5	0	3	2	14	0	1,262
Southland District	1,316	995	5,334	9,796	4,734	131	794	660	60	29	0	23,849
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	4,241	4,116	9,526	25,264	7,687	847	3,043	1,823	294	122	25	56,987
South Island total	5,408	5,404	13,849	31,248	13,059	2,681	5,653	4,026	1,317	324	131	83,099
New Zealand total	6,149	7,348	16,367	34,645	15,558	5,869	8,016	5,520	3,281	686	290	103,726

Figure 18: Distribution of Douglas-fir forest area by age class and island, as at 1 April 2017

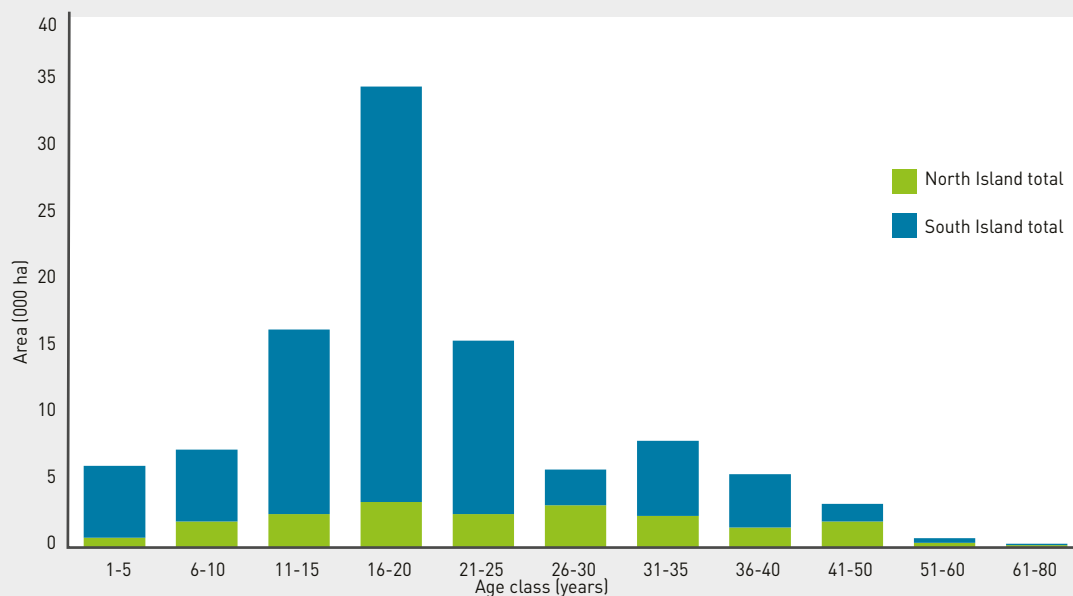


Table 15: Area planted in cypress species by territorial authority, as at 1 April 2017

	Cypress species											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	5	6	20	31	42	24	4	10	0	0	0	142
Whangarei District	1	0	0	9	12	3	0	2	0	0	0	27
Kaipara District	2	0	41	0	6	0	0	0	0	0	0	49
Auckland Council	3	16	41	38	106	24	4	0	5	0	0	237
Region total	11	22	102	78	166	51	8	12	5	0	0	455
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	1	2	0	3	0	0	0	0	6
Hauraki District	0	20	0	0	0	0	3	0	0	0	0	23
Waikato District	0	0	0	1	0	0	7	0	1	0	0	9
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	0	21	31	3	12	0	6	2	0	0	0	75
Rotorua District	24	4	135	10	8	9	43	0	0	0	1	234
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	1	102	57	14	0	40	0	0	0	0	214
Opotiki District	2	0	0	0	0	1	0	0	0	0	0	3
Waipa District	0	0	0	0	3	0	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	1	0	1	1	0	0	0	3
Ruapehu District	4	0	1	3	0	0	1	0	0	0	12	21
South Waikato District	7	2	0	0	10	9	0	0	0	0	0	28
Taupo District	9	222	130	30	47	3	3	0	0	0	0	444
Region total	46	270	399	105	97	22	111	3	1	0	13	1,067
East Coast wood supply region												
Gisborne District	33	26	14	80	58	11	23	27	20	23	4	319
Region total	33	26	14	80	58	11	23	27	20	23	4	319
Hawke's Bay wood supply region												
Wairoa District	0	0	0	0	0	0	0	0	0	0	13	184
Hastings District	15	94	20	22	7	2	1	0	0	0	0	161
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawke's Bay District	0	0	0	0	0	0	6	0	0	0	0	19
Region total	15	94	95	130	7	2	7	0	0	0	13	364
Southern North Island wood supply region												
New Plymouth District	0	0	0	0	0	0	3	0	0	0	1	4
Stratford District	47	1	0	0	4	0	5	0	0	0	1	58
South Taranaki District	0	0	1	4	0	0	0	0	0	0	0	5
Wanganui District	20	3	95	0	0	0	7	0	13	0	0	141
Rangitikei District	1	4	22	4	12	4	19	9	69	26	0	170
Manawatu District	0	0	0	10	0	1	14	0	2	0	1	35
Kapiti Coast District	0	0	0	1	0	0	0	0	0	0	0	1
Upper Hutt City	0	0	0	1	0	2	40	10	0	0	0	53
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	19	7	0	0	0	0	0	0	0	0	0	26
Tararua District	0	0	0	0	0	0	0	0	0	0	0	0
Masterton District	0	4	4	15	13	0	3	0	0	0	0	38
Horowhenua District	0	4	2	4	2	0	0	1	0	0	1	15
Carterton District	0	0	2	0	0	0	0	0	0	0	0	2
South Wairarapa District	0	0	2	8	0	1	0	2	0	0	0	13
Region total	87	23	128	47	38	8	91	25	84	26	4	561
North Island total	192	435	739	440	366	94	240	67	110	49	34	2,766

	Cypress species											
	Age class [years]											Total [ha]
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	1	0	0	9	5	0	0	0	0	0	0	25
Tasman District	4	0	16	29	57	6	0	0	0	0	0	112
Marlborough District	11	12	0	54	35	15	11	2	1	0	0	202
Kaikoura District	0	0	8	0	0	0	0	1	0	0	0	10
Region total	16	12	83	92	97	21	11	3	1	0	12	348
West Coast wood supply region												
Buller District	0	0	0	0	5	0	19	0	0	0	10	34
Grey District	0	40	34	90	17	10	102	10	0	11	1	315
Westland District	0	468	1,514	1,219	666	6	324	23	0	0	0	4,220
Region total	0	508	1,548	1,309	688	16	445	33	0	11	11	4,569
Canterbury wood supply region												
Hurunui District	1	59	14	23	5	1	0	0	0	0	9	112
Waimakariri District	0	0	0	8	12	5	0	0	0	0	0	25
Christchurch City	0	0	0	61	139	3	0	3	0	1	0	207
Selwyn District	0	0	0	5	6	1	0	0	0	0	0	12
Ashburton District	0	0	2	0	2	4	0	0	0	0	0	8
Timaru District	0	0	13	9	12	0	5	0	0	0	0	39
Mackenzie District	0	0	4	0	22	0	0	0	0	0	0	26
Waimate District	0	0	14	6	7	19	0	0	0	0	0	46
Region total	1	59	47	112	205	33	5	3	0	1	9	475
Otago and Southland wood supply region												
Waitaki District	15	6	6	15	13	13	0	1	0	0	4	73
Dunedin City	0	0	23	11	62	40	20	0	0	0	0	156
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	0	0	0	4	0	0	0	0	0	4
Clutha District	62	170	282	229	137	82	101	5	1	0	5	1,074
Gore District	0	0	0	14	0	0	0	0	0	0	0	14
Southland District	28	65	38	112	13	14	81	26	0	0	0	377
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	105	241	349	381	225	153	202	32	1	0	9	1,698
South Island total	122	820	2,027	1,894	1,215	222	663	71	2	12	41	7,090
New Zealand total	314	1,255	2,766	2,334	1,581	316	903	138	112	61	75	9,855

Figure 19: Distribution of cypress species forest area by age class and island, as at 1 April 2017

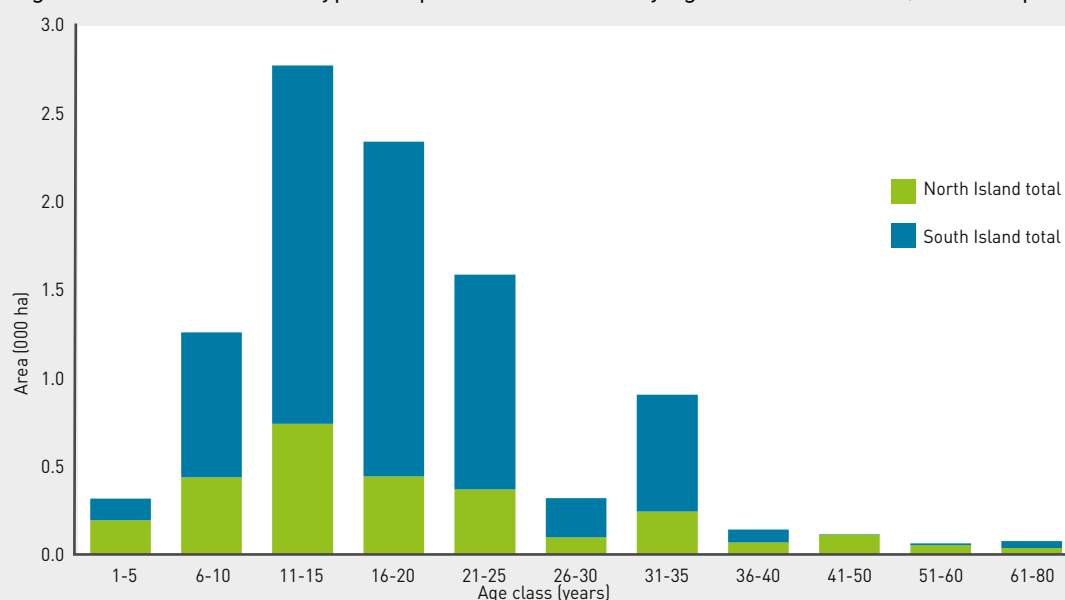


Table 16: Area planted in other softwoods by territorial authority, as at 1 April 2017

	Other softwoods											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	2	1	78	101	59	19	31	3	11	18	35	358
Whangarei District	0	2	15	78	80	3	3	1	3	12	16	213
Kaipara District	0	0	11	66	10	30	2	0	1	1	18	139
Auckland Council	0	2	39	34	66	11	26	6	21	14	4	223
Region total	2	5	143	279	215	63	62	10	36	45	73	933
Central North Island wood supply region												
Thames-Coromandel District	2	0	6	4	19	2	16	3	5	2	36	95
Hauraki District	1	23	15	19	0	0	1	0	8	0	0	67
Waikato District	2	4	46	55	16	16	5	0	10	2	35	191
Matamata-Piako District	1	0	3	15	4	1	1	0	0	0	3	28
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	15	10	23	92	107	5	1	2	0	7	3	265
Rotorua District	44	67	12	123	83	26	67	31	20	13	39	525
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	15	0	10	11	35	8	16	15	4	19	10	143
Opotiki District	1	4	0	2	3	1	0	1	0	0	0	12
Waipa District	0	0	5	25	33	2	1	1	0	0	1	68
Otorohanga District	0	0	3	7	24	24	3	0	3	0	0	64
Waitomo District	0	0	4	31	45	1	5	0	4	14	8	112
Ruapehu District	414	5	20	186	161	5	8	77	12	0	16	904
South Waikato District	5	0	0	0	2	1	25	1	3	0	43	80
Taupo District	79	36	10	46	48	2	49	36	104	20	25	455
Region total	579	149	157	616	580	94	198	167	173	77	219	3,009
East Coast wood supply region												
Gisborne District	185	47	85	57	80	13	25	208	38	241	7	985
Region total	185	47	85	57	80	13	25	208	38	241	7	985
Hawke's Bay wood supply region												
Wairoa District	34	167	64	C	53	0	2	C	3	47	3	439
Hastings District	56	84	17	C	61	12	33	C	9	0	14	352
Napier City	0	0	0	0	0	0	2	0	0	0	0	2
Central Hawke's Bay District	1	1	15	40	13	16	10	0	9	16	41	162
Region total	91	252	96	115	127	28	47	56	21	63	58	955
Southern North Island wood supply region												
New Plymouth District	31	158	92	369	21	12	0	6	3	0	0	693
Stratford District	390	6	9	5	9	0	1	0	1	0	0	421
South Taranaki District	0	0	24	32	30	10	0	0	0	0	3	99
Wanganui District	0	1	80	78	56	2	13	2	13	6	1	252
Rangitikei District	141	170	349	129	33	31	6	12	0	7	13	891
Manawatu District	0	0	23	38	22	8	16	3	0	2	8	120
Kapiti Coast District	0	0	3	13	12	1	0	0	0	0	0	29
Upper Hutt City	0	0	1	3	7	9	0	0	2	18	0	40
Porirua City	0	0	0	0	6	0	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	2	0	0	0	0	0	4
Palmerston North City	11	4	0	0	0	1	0	0	0	0	0	15
Tararua District	4	0	8	22	7	C	C	7	1	0	2	313
Masterton District	2	9	51	44	45	C	C	18	4	45	4	292
Horowhenua District	0	2	9	7	19	9	1	0	3	1	0	51
Carterton District	0	0	1	15	5	7	4	0	5	38	0	75
South Wairarapa District	0	0	7	11	1	4	0	1	0	5	0	29
Region total	579	350	657	766	275	125	344	49	32	122	31	3,329
North Island total	1,435	803	1,138	1,833	1,277	323	676	490	300	548	388	9,210



	Other softwoods											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	1	1	0	0	28	21	9	5	65
Tasman District	0	0	129	71	177	0	173	173	71	6	26	902
Marlborough District	11	0	60	147	93	0	43	4	20	0	1	402
Kaikoura District	0	0	0	7	0	0	0	1	0	0	0	8
Region total	11	38	189	226	271	62	216	206	112	15	32	1,377
West Coast wood supply region												
Buller District	0	0	1	4	31	0	23	188	25	17	5	294
Grey District	0	0	2	1	8	0	39	81	121	101	0	353
Westland District	0	0	68	131	127	0	12	26	4	29	3	400
Region total	0	0	71	136	166	0	74	295	150	147	8	1,047
Canterbury wood supply region												
Hurunui District	11	529	724	61	47	4	343	216	210	13	83	2,241
Waimakariri District	11	7	14	10	127	21	1	4	12	1	0	208
Christchurch City	0	0	23	68	963	0	0	3	4	2	6	1,141
Selwyn District	0	0	6	60	157	0	0	0	7	0	0	301
Ashburton District	0	0	19	58	40	66	12	0	0	30	4	229
Timaru District	0	16	31	43	305	108	102	3	4	10	2	624
Mackenzie District	0	24	4	28	253	71	141	0	156	0	15	874
Waimate District	53	14	47	143	94	7	179	87	4	6	0	634
Region total	87	590	868	471	1,986	352	844	370	397	176	110	6,252
Otago and Southland wood supply region												
Waitaki District	0	68	20	81	133	1	21	14	0	0	1	406
Dunedin City	0	4	2	6	74	21	16	25	0	0	26	249
Queenstown-Lakes District	0	3	0	6	22	3	7	0	0	3	0	44
Central Otago District	271	53	68	197	520	85	83	120	219	90	6	1,712
Clutha District	160	50	55	264	250	45	106	79	22	22	55	1,108
Gore District	0	4	1	5	141	0	0	0	0	0	0	151
Southland District	172	5	63	42	173	43	64	374	30	1	13	980
Invercargill City	0	0	0	0	3	0	0	0	0	0	0	3
Region total	731	187	209	601	1,316	198	297	612	271	130	101	4,653
South Island total	829	815	1,337	1,434	3,739	612	1,431	1,483	930	468	251	13,329
New Zealand total	2,264	1,618	2,475	3,267	5,016	935	2,107	1,973	1,230	1,016	639	22,539

Figure 20: Distribution of other softwoods forest area by age class and island, as at 1 April 2017

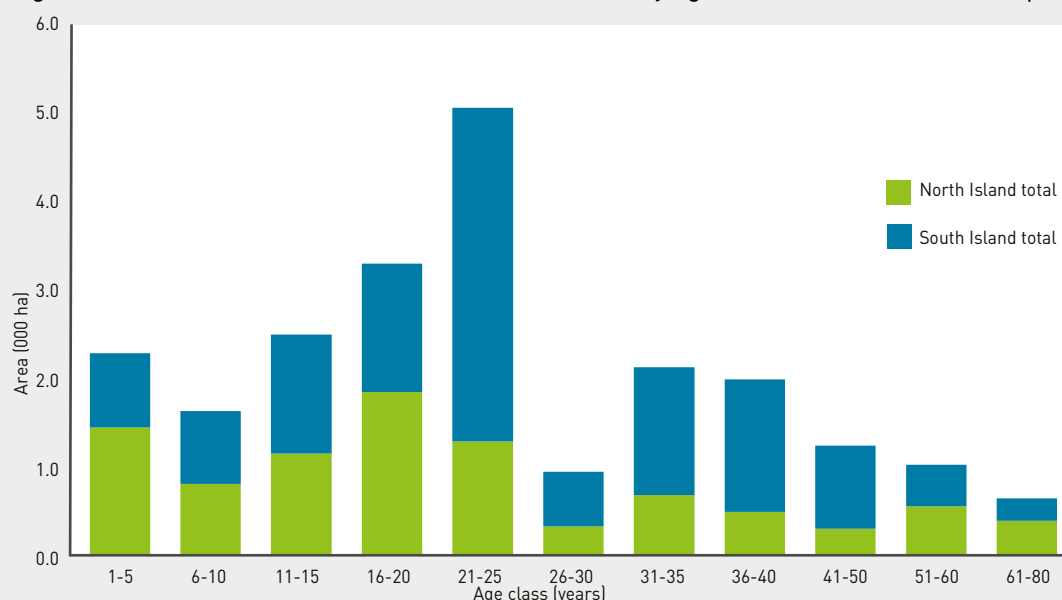


Table 17: Area planted in eucalypt species by territorial authority, as at 1 April 2017

	Eucalypt											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	0	5	17	2	11	4	94	70	3	0	5	211
Whangarei District	0	0	0	0	36	6	5	70	0	0	1	118
Kaipara District	0	0	0	0	151	0	3	1	15	0	0	170
Auckland Council	0	27	18	0	9	7	9	8	5	4	0	87
Region total	0	32	35	2	207	17	111	149	23	4	6	586
Central North Island wood supply region												
Thames-Coromandel District	0	0	0	0	0	0	25	58	15	0	9	107
Hauraki District	0	0	0	1	0	0	0	0	0	0	0	1
Waikato District	0	0	0	0	1	0	2	0	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	0	5	36	161	5	5	27	2	0	66	11	318
Rotorua District	78	0	31	10	31	0	25	2	0	0	9	186
Kawerau District	0	0	0	20	11	0	0	0	0	0	0	31
Whakatane District	0	0	126	74	48	24	2	1	1	0	0	276
Opotiki District	0	0	0	0	0	0	8	1	0	0	0	9
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	62	0	0	2	1	0	0	0	0	1	66
Ruapehu District	0	0	0	4	0	0	1	0	0	0	1	6
South Waikato District	1,842	543	280	392	14	161	2	1	4	0	0	3,239
Taupo District	513	809	138	97	430	13	22	2	5	206	1	2,236
Region total	2,433	1,419	611	759	542	204	118	67	25	272	32	6,482
East Coast wood supply region												
Gisborne District	8	255	4	13	21	41	82	14	14	0	6	458
Region total	8	255	4	13	21	41	82	14	14	0	6	458
Hawke's Bay wood supply region												
Wairoa District	176	66	116	26	0	0	0	0	1	0	0	385
Hastings District	25	600	12	0	2	3	30	0	7	1	0	680
Napier City	0	0	0	0	6	0	0	0	0	0	0	6
Central Hawke's Bay District	0	127	2	0	0	0	0	3	12	0	0	144
Region total	201	793	130	26	8	3	30	3	20	1	0	1,215
Southern North Island wood supply region												
New Plymouth District	0	0	0	0	0	0	0	0	0	0	1	1
Stratford District	0	0	0	0	0	0	0	0	0	0	1	1
South Taranaki District	1	2	0	0	0	1	0	0	0	0	0	4
Wanganui District	0	0	0	0	0	0	0	19	0	0	0	19
Rangitikei District	7	6	2	5	7	1	4	1	0	0	0	31
Manawatu District	3	0	0	10	1	0	0	0	0	0	0	14
Kapiti Coast District	0	0	0	0	0	0	0	0	0	0	0	0
Upper Hutt City	0	2	0	0	0	3	0	13	0	0	0	18
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	10	0	0	0	0	0	0	0	0	0	0	10
Tararua District	0	0	0	0	0	0	0	0	0	0	0	0
Masterton District	8	8	2	4	2	0	2	0	0	0	0	27
Horowhenua District	4	0	0	0	1	0	19	1	1	0	0	26
Carterton District	0	0	0	0	0	0	0	0	0	0	0	0
South Wairarapa District	0	0	0	0	0	8	1	105	18	0	0	132
Region total	32	18	4	19	11	13	26	139	19	0	2	282
North Island total	2,674	2,518	784	820	789	278	367	372	101	277	46	9,023

	Eucalypt											
	Age class [years]											Total [ha]
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	0	0	1	0	17	0	0	0	18
Tasman District	0	0	0	1	7	5	76	145	69	0	3	306
Marlborough District	42	54	21	3	24	3	23	59	2	2	1	234
Kaikoura District	0	0	0	0	0	0	0	0	0	0	0	0
Region total	42	54	21	4	31	9	99	221	71	2	4	558
West Coast wood supply region												
Buller District	0	0	0	0	0	0	28	303	17	0	7	355
Grey District	0	0	0	0	3	0	0	20	62	1	0	86
Westland District	0	0	0	1	2	0	11	22	7	0	0	43
Region total	0	0	0	1	5	0	39	345	86	1	7	484
Canterbury wood supply region												
Hurunui District	0	0	14	0	0	1	0	0	0	0	0	15
Waimakariri District	6	0	0	0	0	0	0	0	0	0	0	6
Christchurch City	0	0	0	10	24	2	3	0	0	0	10	49
Selwyn District	0	0	2	0	0	1	6	0	0	0	0	9
Ashburton District	0	0	0	0	12	0	3	0	0	0	0	15
Timaru District	0	0	3	0	7	3	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	2	0	0	0	0	2
Region total	6	0	19	10	43	7	14	0	0	0	10	109
Otago and Southland wood supply region												
Waitaki District	8	37	0	5	0	48	23	10	1	0	1	133
Dunedin City	0	0	0	0	3	26	29	9	1	0	0	68
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	0	0	1	0	8	20	1	0	0	30
Clutha District	73	60	5	660	18	14	171	65	9	14	8	1,097
Gore District	0	97	0	501	0	35	0	0	0	0	0	633
Southland District	1,897	1,193	610	3,999	1,483	900	24	45	19	0	1	10,171
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	1,978	1,387	615	5,165	1,505	1,023	255	149	31	14	10	12,132
South Island total	2,026	1,441	655	5,180	1,584	1,039	407	715	188	17	31	13,283
New Zealand total	4,700	3,959	1,439	6,000	2,372	1,317	774	1,087	289	294	77	22,307

Figure 21: Distribution of eucalypt species forest area by age class and island, as at 1 April 2017

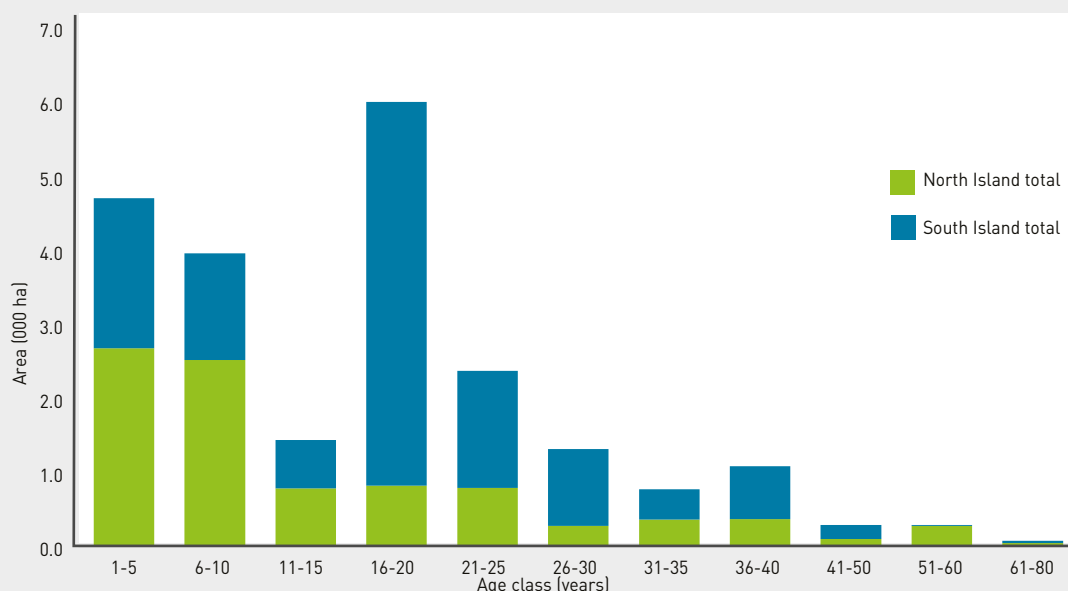


Table 18: Area planted in other hardwoods by territorial authority, as at 1 April 2017

	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)	61-80 Years (ha)	Total (ha)
Northland wood supply region												
Far North District	0	0	123	387	125	31	121	67	17	4	3	883
Whangarei District	3	0	4	115	153	35	14	13	3	0	2	342
Kaipara District	0	0	25	215	78	39	11	14	13	0	0	395
Auckland Council	0	8	45	175	203	55	84	64	43	7	9	693
Region total	8	8	197	892	559	160	230	158	76	11	14	2,313
Central North Island wood supply region												
Thames-Coromandel District	0	0	2	2	35	2	8	3	6	0	2	60
Hauraki District	3	40	0	7	17	0	0	0	0	0	6	73
Waikato District	0	5	31	14	41	25	6	1	4	0	1	128
Matamata-Piako District	0	0	0	8	14	2	1	0	0	0	0	25
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	2	7	2	1	1	0	0	0	0	13
Western Bay of Plenty District	1	14	20	37	68	29	53	24	0	1	0	247
Rotorua District	3	7	36	179	170	31	91	6	28	1	9	561
Kawerau District	0	0	0	0	3	0	0	0	0	0	0	3
Whakatane District	0	0	19	97	69	21	5	3	0	2	0	216
Opotiki District	1	4	4	13	5	5	0	0	0	0	0	32
Waipa District	0	0	36	133	31	2	2	9	0	0	0	213
Otorohanga District	0	0	9	9	17	9	29	0	0	0	2	75
Waitomo District	0	0	2	21	44	2	7	3	2	0	0	81
Ruapehu District	0	0	1	3	2	4	18	1	0	0	0	29
South Waikato District	0	9	30	17	32	3	0	3	0	2	0	96
Taupo District	2	15	22	93	80	6	11	9	6	4	0	248
Region total	10	94	214	640	630	142	232	62	46	10	20	2,100
East Coast wood supply region												
Gisborne District	131	454	11	36	83	70	103	25	21	7	8	948
Region total	131	454	11	36	83	70	103	25	21	7	8	948
Hawke's Bay wood supply region												
Wairoa District	91	9	19	3	3	0	17	1	0	3	0	146
Hastings District	3	47	23	44	24	22	26	11	13	2	4	219
Napier City	0	0	0	0	0	0	2	0	0	0	0	2
Central Hawke's Bay District	6	0	7	17	32	4	64	0	1	3	4	138
Region total	100	56	49	64	59	26	109	12	14	8	8	505
Southern North Island wood supply region												
New Plymouth District	1	0	9	20	21	3	4	1	0	0	0	59
Stratford District	31	2	4	12	46	1	1	0	0	0	0	97
South Taranaki District	0	308	5	22	21	5	1	3	0	0	0	365
Wanganui District	0	1	11	32	C	6	1	C	3	1	6	95
Rangitikei District	0	0	5	48	47	27	2	6	2	38	6	181
Manawatu District	0	0	6	20	C	13	23	C	0	0	1	105
Kapiti Coast District	0	0	1	12	16	1	0	1	0	0	0	31
Upper Hutt City	0	0	0	0	3	0	5	1	0	0	0	9
Porirua City	0	0	0	0	0	0	2	0	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	8	1	53	0	0	0	0	0	0	62
Tararua District	0	287	7	18	12	C	C	8	0	3	0	351
Masterton District	52	24	17	7	23	C	C	5	0	0	0	157
Horowhenua District	0	0	1	0	54	18	1	0	0	2	13	89
Carterton District	42	0	1	0	2	9	2	10	14	0	0	80
South Wairarapa District	0	0	1	1	34	42	17	9	0	0	0	104
Region total	126	622	76	193	391	136	93	61	19	44	26	1,786
North Island total	375	1,233	547	1,825	1,722	534	768	317	176	80	76	7,651

	Other hardwoods											
	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	0	5	5	0	0	3	2	0	15
Tasman District	0	0	5	50	102	0	41	51	32	37	13	373
Marlborough District	3	0	10	19	95	0	26	42	10	0	6	246
Kaikoura District	0	0	0	0	0	0	1	3	0	0	0	4
Region total	3	8	15	69	202	75	68	96	45	39	19	638
West Coast wood supply region												
Buller District	0	0	0	4	7	0	106	0	0	0	1	118
Grey District	0	72	44	0	6	6	45	2	0	0	0	175
Westland District	0	68	126	71	530	500	484	8	0	0	0	1,787
Region total	0	140	170	75	543	506	635	10	0	0	1	2,080
Canterbury wood supply region												
Hurunui District	0	0	19	6	35	5	10	0	1	0	0	76
Waimakariri District	0	0	0	3	97	20	3	0	0	0	0	123
Christchurch City	0	0	189	187	537	0	0	11	0	0	0	962
Selwyn District	0	0	0	9	27	0	0	1	1	3	0	64
Ashburton District	0	0	0	7	9	8	6	0	0	0	0	30
Timaru District	0	0	2	25	20	5	12	0	5	0	10	79
Mackenzie District	0	0	0	8	30	1	2	3	0	0	20	64
Waimate District	0	0	3	6	27	13	2	0	0	6	1	58
Region total	0	0	213	251	782	81	67	15	7	9	31	1,456
Otago and Southland wood supply region												
Waitaki District	7	17	2	6	49	5	14	4	2	0	3	109
Dunedin City	0	0	0	1	33	7	11	0	0	0	0	52
Queenstown-Lakes District	0	0	0	0	0	0	3	0	0	0	0	3
Central Otago District	6	0	0	11	48	15	7	1	0	3	1	92
Clutha District	0	0	7	28	27	21	28	21	6	2	22	162
Gore District	0	0	2	4	3	7	0	0	0	0	0	16
Southland District	2	3	10	29	143	21	17	5	0	1	2	233
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	15	20	21	79	303	76	80	31	8	6	28	667
South Island total	18	168	419	474	1,830	738	850	152	60	54	79	4,841
New Zealand total	392	1,401	966	2,299	3,552	1,272	1,618	468	236	134	155	12,492

Figure 22: Distribution of other hardwoods forest area by age class and island, as at 1 April 2017

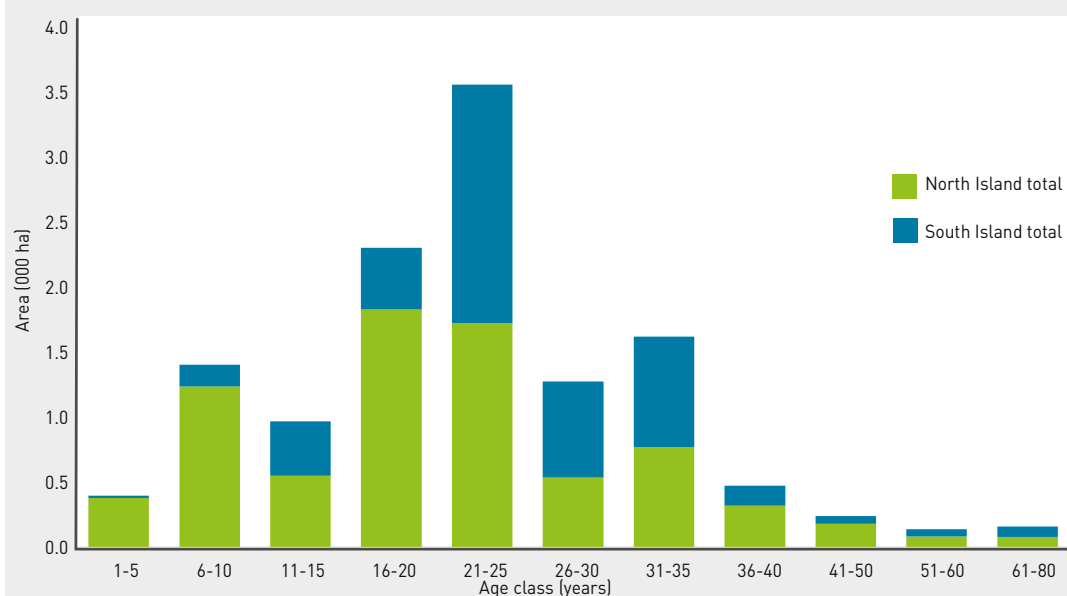


Table 19: Area of radiata pine pruned with production thinning by territorial authority, as at 1 April 2017

	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	320	384	268	1,004	1,774	1,906	3,731	343	61	0	0	9,791
Whangarei District	13	3	157	446	1,409	400	170	107	246	0	1	2,952
Kaipara District	80	0	25	603	2,137	617	177	80	19	0	4	3,742
Auckland Council	24	66	151	1,063	2,061	135	223	274	216	5	0	4,218
Region total	437	453	601	3,116	7,381	3,058	4,301	804	542	5	5	20,703
Central North Island wood supply region												
Thames-Coromandel District	0	C	28	82	398	34	C	49	44	0	0	802
Hauraki District	0	C	3	77	333	24	C	21	5	0	0	494
Waikato District	0	37	540	1,792	793	168	27	36	2	0	0	3,395
Matamata-Piako District	0	0	13	54	95	26	18	9	1	0	0	216
Hamilton City	0	0	0	0	0	0	1	0	0	0	0	1
Tauranga District	0	0	1	2	6	0	5	0	0	0	0	14
Western Bay of Plenty District	110	61	189	360	1,298	664	82	64	0	0	0	2,828
Rotorua District	12	42	712	716	1,181	1,170	96	159	5	1	8	4,102
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	0	1,007	1,143	1,304	3,049	67	44	7	0	0	6,621
Opotiki District	0	5	1	8	34	0	0	11	0	0	0	59
Waipa District	2	95	15	262	442	31	25	25	3	0	0	900
Otorohanga District	0	0	49	120	420	70	19	12	1	0	0	691
Waitomo District	40	C	119	996	1,641	168	99	C	0	0	0	3,152
Ruapehu District	0	98	242	1,417	2,830	108	90	64	1	0	0	4,850
South Waikato District	0	C	8	27	141	18	59	C	2	0	0	268
Taupo District	96	529	2,630	5,300	2,420	7,616	3,390	159	15	0	0	22,155
Region total	260	985	5,557	12,356	13,336	13,146	4,110	703	86	1	8	50,548
East Coast wood supply region												
Gisborne District	0	27	181	606	2,866	601	204	174	24	0	0	4,683
Region total	0	27	181	606	2,866	601	204	174	24	0	0	4,683
Hawke's Bay wood supply region												
Wairoa District	144	65	23	124	753	43	152	10	9	0	0	1,323
Hastings District	688	121	109	382	3,468	411	293	151	44	0	1	5,668
Napier City	0	0	0	0	6	0	2	0	0	0	0	8
Central Hawke's Bay District	186	92	134	936	2,159	261	246	221	85	0	0	4,320
Region total	1,018	278	266	1,442	6,386	715	693	382	138	0	1	11,319
Southern North Island wood supply region												
New Plymouth District	1	0	73	94	371	185	94	40	8	1	0	867
Stratford District	0	0	67	98	861	133	13	20	4	0	1	1,197
South Taranaki District	181	68	265	1,689	791	343	128	145	34	2	3	3,649
Wanganui District	94	13	941	1,658	3,970	1,042	69	18	54	2	0	7,861
Rangitikei District	53	122	418	431	2,721	469	423	134	44	4	0	4,818
Manawatu District	46	73	181	280	1,318	208	200	156	27	4	0	2,493
Kapiti Coast District	36	0	59	399	481	30	49	24	5	0	0	1,083
Upper Hutt City	0	0	6	96	89	49	30	23	9	0	24	326
Porirua City	0	0	0	14	90	18	164	7	0	0	0	293
Wellington City	0	68	0	23	0	77	2	2	0	0	0	172
Lower Hutt City	0	0	0	12	34	0	3	15	14	0	0	78
Palmerston North City	C	2	C	98	270	32	6	55	15	0	0	647
Tararua District	C	973	C	248	1,486	294	278	135	25	0	0	3,677
Masterton District	55	0	100	246	935	188	26	41	22	0	4	1,617
Horowhenua District	0	0	57	160	1,057	360	179	86	18	8	1	1,926
Carterton District	0	0	29	6	77	15	1	10	5	0	0	143
South Wairarapa District	6	23	74	136	122	37	21	13	13	0	0	445
Region total	621	1,342	2,529	5,687	14,673	3,480	1,686	924	297	21	33	31,292
North Island total	2,336	3,085	9,133	23,207	44,642	21,000	10,994	2,987	1,087	27	47	118,544



	Age class (years)												Total (ha)
	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)	61-80 Years (ha)		
Nelson and Marlborough wood supply region													
Nelson City	0	0	0	5	90	0	0	0	0	0	0	95	
Tasman District	C	101	194	455	1,966	384	264	C	51	0	1	3,519	
Marlborough District	C	165	242	1,314	3,630	399	791	C	49	0	0	6,832	
Kaikoura District	0	0	3	27	112	8	4	7	0	0	0	161	
Region total	153	266	439	1,801	5,798	791	1,059	199	100	0	1	10,607	
West Coast wood supply region													
Buller District	0	0	1	16	81	2	0	0	0	0	0	100	
Grey District	20	90	0	7	173	11	44	73	18	0	0	436	
Westland District	0	0	3	28	52	4	23	0	0	0	0	110	
Region total	20	90	4	51	306	17	67	73	18	0	0	646	
Canterbury wood supply region													
Hurunui District	C	16	341	485	1,579	289	328	129	C	58	0	3,302	
Waimakariri District	0	0	28	89	961	291	82	7	1	26	0	1,485	
Christchurch City	C	C	176	410	825	151	122	75	C	0	0	1,834	
Selwyn District	0	C	2	77	460	233	90	56	C	0	0	957	
Ashburton District	0	0	14	64	167	50	38	21	28	0	0	382	
Timaru District	12	12	80	119	655	194	81	31	33	4	0	1,221	
Mackenzie District	0	0	11	67	191	16	49	15	1	0	0	350	
Waimate District	12	0	38	138	394	117	66	28	2	0	0	795	
Region total	102	42	690	1,449	5,232	1,341	856	362	165	88	0	10,326	
Otago and Southland wood supply region													
Waitaki District	0	5	59	303	892	99	67	122	26	0	0	1,573	
Dunedin City	C	18	C	C	C	238	75	0	0	0	0	1,236	
Queenstown-Lakes District	0	0	0	0	15	0	31	65	0	0	0	111	
Central Otago District	0	0	C	29	C	16	85	12	4	0	37	318	
Clutha District	232	0	126	946	2,374	430	90	49	55	1	2	4,305	
Gore District	0	0	2	199	475	14	7	17	18	0	0	732	
Southland District	C	214	517	C	1,743	363	207	179	192	1	0	5,962	
Invercargill City	0	0	3	0	63	0	0	1	0	0	0	67	
Region total	462	237	789	3,916	6,396	1,160	562	445	295	2	39	14,304	
South Island total	736	635	1,922	7,218	17,732	3,309	2,543	1,079	578	90	40	35,883	
New Zealand total	3,072	3,720	11,055	30,425	62,374	24,310	13,537	4,066	1,665	117	87	154,427	

Figure 23: Distribution of radiata pine pruned with production thinning forest area by age class and island, as at 1 April 2017

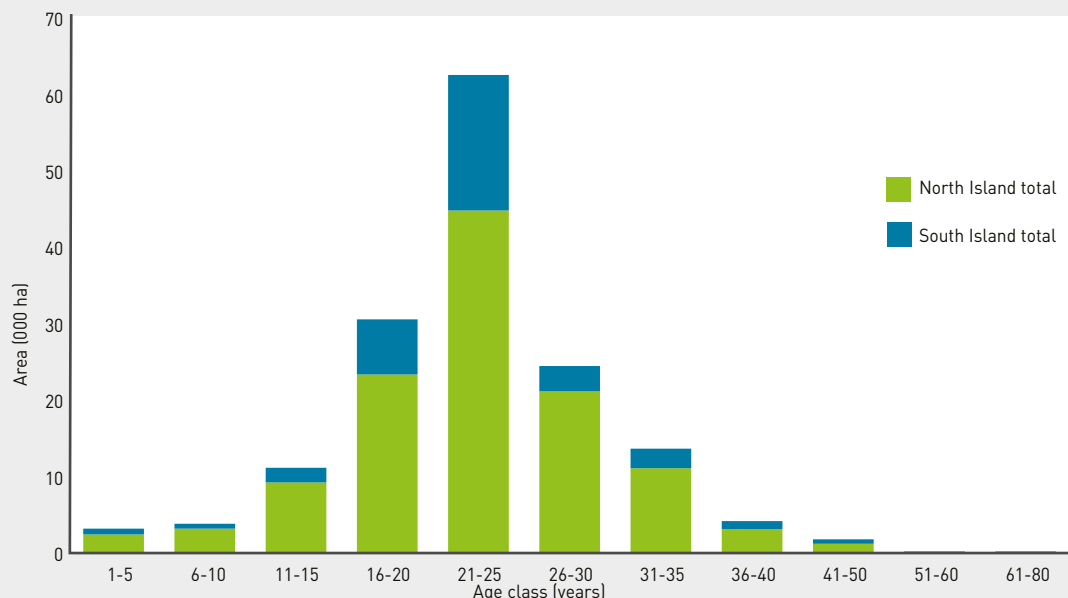


Table 20: Area of radiata pine unpruned with production thinning by territorial authority, as at 1 April 2017

	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Northland wood supply region												
Far North District	377	1,720	2,018	858	58	0	24	105	0	0	0	5,160
Whangarei District	0	0	0	0	1	0	0	0	3	0	0	4
Kaipara District	0	0	26	13	75	304	11	0	0	0	0	429
Auckland Council	189	0	29	161	1,102	391	0	0	0	0	0	1,872
Region total	566	1,720	2,073	1,032	1,236	695	35	105	3	0	0	7,465
Central North Island wood supply region												
Thames-Coromandel District	11	85	100	42	102	0	51	95	4	0	0	490
Hauraki District	0	0	0	0	0	0	0	0	0	0	0	0
Waikato District	0	0	0	1	13	0	0	0	0	0	0	14
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	9	0	25	99	84	11	2	0	0	0	0	230
Rotorua District	747	414	5	55	116	44	0	0	0	0	1	1,382
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	2,252	383	8	101	203	33	0	23	0	0	0	3,003
Opotiki District	0	0	5	17	4	0	40	0	0	0	0	66
Waipa District	0	0	3	42	29	0	0	0	0	0	0	74
Otorohanga District	0	0	9	12	8	2	0	0	0	0	0	31
Waitomo District	7	0	37	265	448	32	0	0	0	0	0	789
Ruapehu District	0	163	106	757	634	902	23	0	0	0	0	2,585
South Waikato District	0	0	3	6	24	0	0	0	0	0	0	33
Taupo District	14,204	2,900	1,405	222	605	917	163	0	5	0	0	20,421
Region total	17,230	3,945	1,706	1,619	2,270	1,941	279	118	9	0	1	29,118
East Coast wood supply region												
Gisborne District	722	340	39	9	270	294	215	20	18	0	0	1,927
Region total	722	340	39	9	270	294	215	20	18	0	0	1,927
Hawke's Bay wood supply region												
Wairoa District	0	0	5	57	412	0	38	33	0	0	0	545
Hastings District	212	70	4	29	560	3	8	0	7	0	0	893
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawke's Bay District	0	0	0	23	8	8	15	0	4	0	0	58
Region total	212	70	9	109	980	11	61	33	11	0	0	1,496
Southern North Island wood supply region												
New Plymouth District	0	2	3	5	75	0	0	0	0	0	0	85
Stratford District	0	0	0	0	0	0	0	0	0	0	0	0
South Taranaki District	0	0	0	0	12	0	3	0	2	0	0	17
Wanganui District	156	57	85	0	196	10	79	0	0	0	0	583
Rangitikei District	0	333	742	812	611	74	0	6	3	0	2	2,583
Manawatu District	0	0	1	1	10	0	8	0	0	0	0	20
Kapiti Coast District	0	0	0	0	10	0	0	0	0	0	0	10
Upper Hutt City	0	0	0	0	0	0	0	0	0	0	0	0
Porirua City	0	0	0	0	0	0	0	0	0	0	0	0
Wellington City	0	0	0	28	0	0	8	0	0	0	0	36
Lower Hutt City	0	0	0	0	0	0	46	36	0	0	0	82
Palmerston North City	0	0	0	1	41	0	0	0	0	0	0	42
Tararua District	0	0	13	46	177	7	30	5	6	0	0	284
Masterton District	23	98	72	74	156	29	30	4	0	0	0	486
Horowhenua District	111	244	336	331	292	34	0	1	0	27	7	1,383
Carterton District	0	0	0	1	7	0	3	0	0	0	0	11
South Wairarapa District	23	21	103	258	51	10	6	3	0	0	0	475
Region total	313	755	1,355	1,557	1,638	164	213	55	11	27	9	6,097
North Island total	19,043	6,830	5,182	4,326	6,394	3,105	803	331	52	27	10	46,103

	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	0	0	0	4	8	0	0	0	0	0	0	12
Tasman District	C	99	265	164	557	67	107	C	8	15	0	1,357
Marlborough District	C	57	19	95	332	151	50	C	98	0	0	936
Kaikoura District	0	0	0	0	6	0	0	0	0	0	0	6
Region total	26	156	284	263	903	218	157	183	106	15	0	2,311
West Coast wood supply region												
Buller District	0	0	0	0	0	0	0	0	0	0	0	0
Grey District	0	0	0	4	1	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	4	1	0	0	0	4	0	0	9
Canterbury wood supply region												
Hurunui District	20	218	110	128	467	125	24	46	4	30	0	1,173
Waimakariri District	0	0	9	13	142	36	14	2	8	6	2	232
Christchurch City	109	0	2	59	69	3	7	0	0	1	0	250
Selwyn District	0	0	33	218	267	12	6	19	4	0	1	560
Ashburton District	0	0	3	8	44	20	0	7	30	0	0	112
Timaru District	0	0	1	1	33	61	22	4	0	0	0	122
Mackenzie District	10	111	8	22	28	13	16	12	29	3	0	252
Waimate District	0	0	0	19	65	13	2	2	2	0	0	103
Region total	139	329	166	468	1,115	283	91	92	77	40	3	2,804
Otago and Southland wood supply region												
Waitaki District	0	0	1	16	84	15	25	20	0	0	0	161
Dunedin City	0	0	0	0	5	0	0	0	0	0	0	5
Queenstown-Lakes District	0	0	0	1	0	0	0	0	0	0	0	1
Central Otago District	0	0	0	0	3	0	0	0	0	0	0	3
Clutha District	0	4	923	291	113	17	7	7	0	1	1	1,364
Gore District	0	0	0	6	38	0	0	0	0	0	0	44
Southland District	18	212	247	174	218	54	10	23	67	4	0	1,027
Invercargill City	0	0	0	5	6	0	0	0	0	0	0	11
Region total	18	216	1,171	493	467	86	42	50	67	5	1	2,616
South Island total	183	702	1,622	1,228	2,486	587	290	325	254	60	4	7,741
New Zealand total	19,226	7,532	6,804	5,554	8,880	3,692	1,093	656	306	87	14	53,844

Figure 24: Distribution of radiata pine unpruned with production thinning forest area by age class and island, as at 1 April 2017

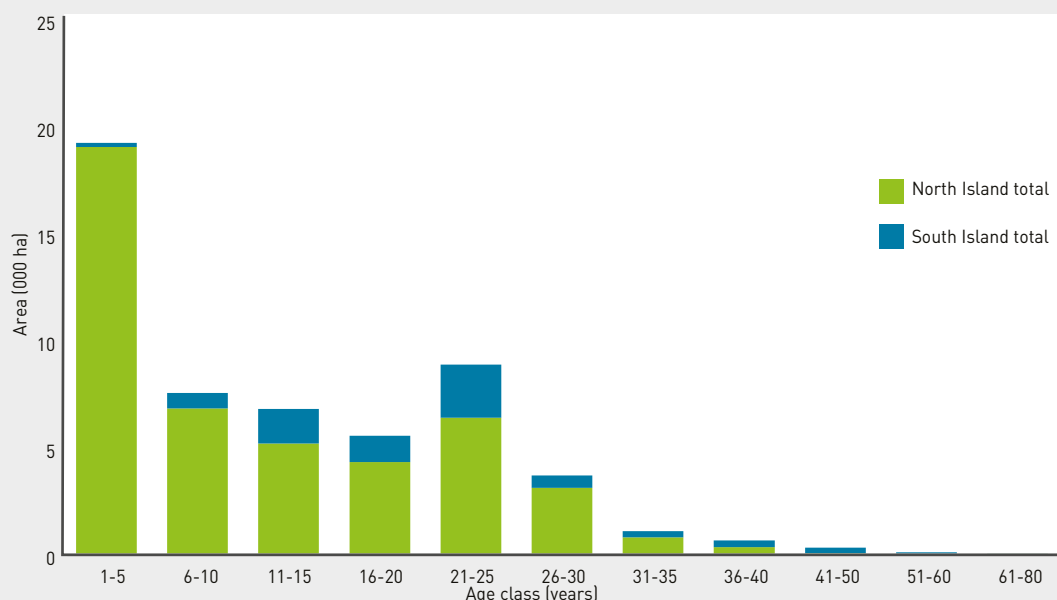


Table 21: Area of radiata pine pruned without production thinning by territorial authority, as at 1 April 2017

	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)	61-80 Years (ha)	Total (ha)
Northland wood supply region												
Far North District	741	804	1,930	3,712	12,002	3,798	2,017	549	89	4	0	25,646
Whangarei District	316	116	328	2,461	3,056	845	217	116	8	0	2	7,465
Kaipara District	73	294	831	2,665	3,157	292	225	45	53	13	0	7,648
Auckland Council	523	939	2,074	1,745	3,362	202	242	715	64	22	2	9,890
Region total	1,653	2,153	5,163	10,583	21,577	5,137	2,701	1,425	214	39	4	50,649
Central North Island wood supply region												
Thames-Coromandel District	0	C	91	134	707	104	C	62	29	0	0	1,841
Hauraki District	4	C	19	521	1,037	154	C	0	0	0	0	1,760
Waikato District	192	55	380	1,302	2,472	502	170	42	29	0	54	5,197
Matamata-Piako District	45	0	7	48	289	11	4	8	2	0	0	414
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Tauranga District	0	0	9	24	34	16	0	0	0	0	0	83
Western Bay of Plenty District	1,139	650	426	2,283	3,768	1,169	229	19	182	0	0	9,865
Rotorua District	1,357	3,344	3,404	5,009	4,941	1,759	182	44	14	0	1	20,055
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	2,435	2,475	2,210	8,346	13,981	2,735	617	359	23	1	0	33,182
Opotiki District	293	450	280	730	359	1,289	1,399	247	15	0	0	5,062
Waipa District	35	41	86	264	208	33	7	17	0	0	0	691
Otorohanga District	132	9	722	381	643	77	8	22	0	0	0	1,994
Waitomo District	7	C	734	3,529	4,868	474	124	C	3	0	0	9,776
Ruapehu District	0	99	1,249	2,597	3,195	1,995	910	438	0	0	0	10,483
South Waikato District	9	C	347	796	1,578	1,830	15	C	2	0	0	4,585
Taupo District	2,423	13,384	16,150	12,001	7,023	4,358	2,203	51	0	5	0	57,598
Region total	8,072	20,544	26,114	37,965	45,103	16,506	6,576	1,347	299	6	55	162,586
East Coast wood supply region												
Gisborne District	12,101	6,691	6,056	20,442	37,137	9,626	4,893	1,253	209	8	0	98,415
Region total	12,101	6,691	6,056	20,442	37,137	9,626	4,893	1,253	209	8	0	98,415
Hawke's Bay wood supply region												
Wairoa District	4,421	4,700	6,463	6,878	17,692	1,024	851	187	87	0	2	42,304
Hastings District	2,326	1,803	4,927	6,265	10,021	3,683	527	87	29	8	1	29,677
Napier City	0	0	0	0	53	0	0	0	0	0	0	53
Central Hawke's Bay District	161	405	843	2,513	2,226	444	148	50	23	3	0	6,816
Region total	6,908	6,908	12,233	15,656	29,993	5,151	1,526	324	139	11	3	78,850
Southern North Island wood supply region												
New Plymouth District	32	138	77	569	545	47	28	25	4	0	0	1,465
Stratford District	157	0	95	160	1,706	369	31	5	0	0	0	2,523
South Taranaki District	69	10	183	485	2,159	405	68	43	0	0	0	3,422
Wanganui District	C	1,044	C	1,413	5,825	1,188	248	24	19	0	1	11,908
Rangitikei District	129	88	261	2,810	2,505	377	102	81	13	0	0	6,366
Manawatu District	25	3	140	283	974	134	65	56	43	0	0	1,723
Kapiti Coast District	63	63	114	182	683	97	116	8	0	0	0	1,326
Upper Hutt City	23	1	316	230	369	41	14	11	8	0	1	1,014
Porirua City	10	3	123	18	205	73	0	4	5	0	0	441
Wellington City	0	0	8	13	268	2	17	0	0	0	0	308
Lower Hutt City	0	0	0	10	26	0	0	45	0	0	0	81
Palmerston North City	C	117	C	7	239	31	10	10	20	0	0	654
Tararua District	C	178	C	597	1,236	170	96	73	125	3	0	3,590
Masterton District	2,107	1,852	2,572	4,192	9,028	1,435	1,895	189	105	4	2	23,380
Horowhenua District	81	89	184	117	676	98	19	5	21	0	0	1,289
Carterton District	1,288	900	489	2,226	1,491	467	93	101	5	0	0	7,060
South Wairarapa District	490	436	348	1,144	1,344	24	35	19	6	0	0	3,846
Region total	6,299	4,922	6,564	14,456	29,278	4,958	2,836	698	374	7	4	70,396
North Island total	35,031	41,217	56,130	99,102	163,088	41,378	18,531	5,047	1,235	71	66	460,896

	Age class [years]											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	109	99	15	157	454	200	12	34	2	0	0	1,082
Tasman District	559	531	803	4,629	7,264	1,833	459	158	27	1	0	16,264
Marlborough District	678	1,052	2,097	5,162	12,110	1,979	2,095	331	133	68	0	25,705
Kaikoura District	24	23	24	117	529	7	2	30	9	0	0	765
Region total	1,370	1,705	2,939	10,065	20,357	4,018	2,568	553	171	69	0	43,815
West Coast wood supply region												
Buller District	65	0	12	67	932	258	7	36	8	0	0	1,385
Grey District	33	140	1,211	1,685	1,077	222	846	69	70	29	0	5,382
Westland District	0	0	590	923	1,459	33	32	20	72	0	0	3,129
Region total	98	140	1,813	2,675	3,468	513	885	125	150	29	0	9,896
Canterbury wood supply region												
Hurunui District	C	59	350	1,392	1,633	219	295	76	C	5	0	4,194
Waimakariri District	140	232	70	200	530	210	26	5	0	0	0	1,413
Christchurch City	C	C	123	529	2,113	56	221	68	C	0	1	3,361
Selwyn District	10	C	44	198	602	41	52	4	C	0	0	960
Ashburton District	64	30	46	97	243	21	6	0	3	0	0	510
Timaru District	213	157	236	348	1,044	758	162	8	1	0	0	2,927
Mackenzie District	31	13	57	167	777	94	26	37	4	4	0	1,210
Waimate District	140	214	283	1,262	1,489	234	266	34	0	0	0	3,922
Region total	823	738	1,209	4,193	8,432	1,633	1,055	233	173	9	1	18,497
Otago and Southland wood supply region												
Waitaki District	1,002	296	1,760	1,982	2,679	619	468	40	82	5	11	8,943
Dunedin City	C	467	490	C	2,123	508	612	62	24	0	0	5,953
Queenstown-Lakes District	0	0	0	0	6	11	0	2	0	3	1	23
Central Otago District	0	5	42	111	572	23	87	49	30	0	0	919
Clutha District	2,976	2,176	2,718	7,833	12,682	2,126	1,028	276	105	10	2	31,932
Gore District	0	0	3	169	237	18	21	15	1	0	0	464
Southland District	C	1,593	1,152	C	6,034	782	170	297	30	1	0	14,548
Invercargill City	0	0	8	11	32	15	0	6	0	0	0	72
Region total	5,976	4,537	6,173	14,263	24,365	4,102	2,386	747	272	19	14	62,853
South Island total	8,266	7,120	12,134	31,196	56,622	10,266	6,893	1,658	766	126	15	135,062
New Zealand total	43,297	48,337	68,264	130,298	219,710	51,644	25,425	6,705	2,001	197	81	595,958

Figure 25: Distribution of radiata pine pruned without production thinning forest area by age class and island, as at 1 April 2017

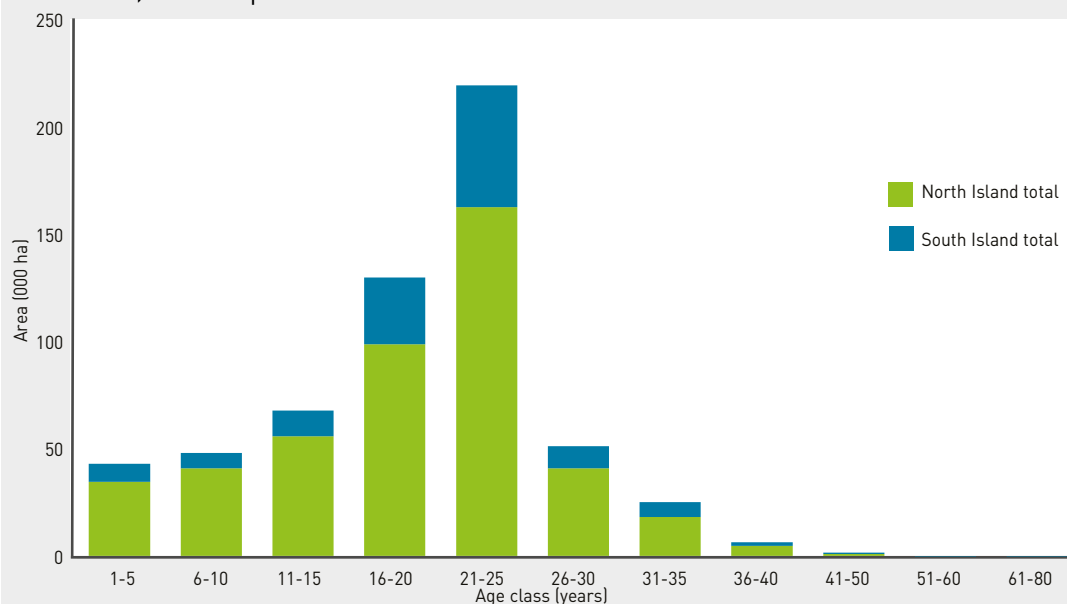


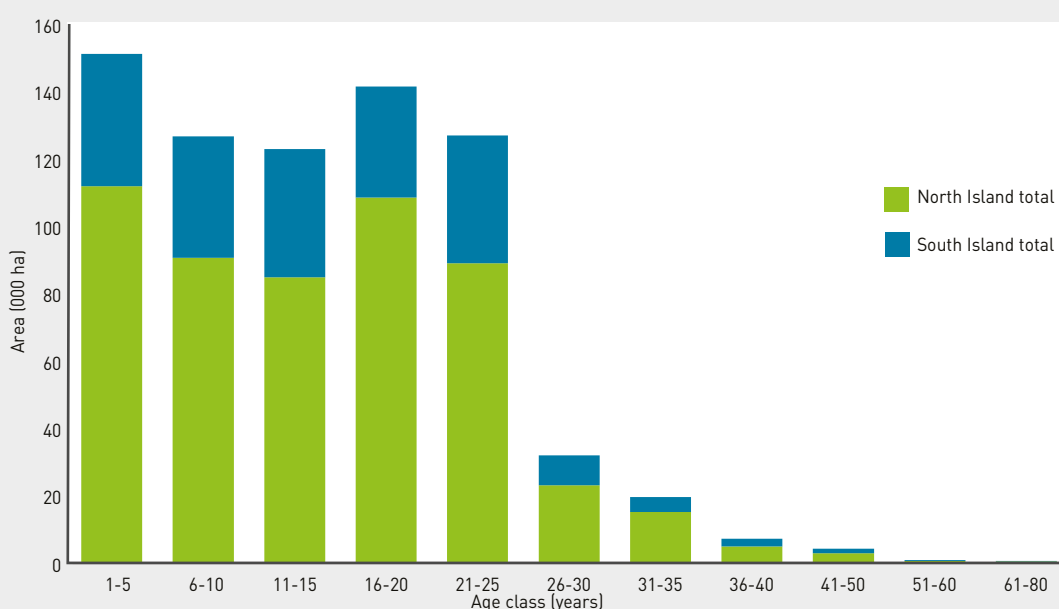
Table 22: Area of radiata pine unpruned without production thinning by territorial authority, as at 1 April 2017

	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)	61-80 Years (ha)	Total (ha)
Northland wood supply region												
Far North District	12,691	9,573	5,370	4,207	4,440	1,871	2,579	298	312	11	0	41,352
Whangarei District	6,592	3,539	2,767	2,249	2,063	413	1,277	84	60	2	0	19,046
Kaipara District	6,705	2,672	1,822	2,643	3,635	3,318	845	33	82	11	2	21,768
Auckland Council	1,561	3,863	5,245	5,854	4,313	345	217	128	33	17	12	21,588
Region total	27,549	19,647	15,204	14,953	14,451	5,947	4,918	543	487	41	14	103,754
Central North Island wood supply region												
Thames-Coromandel District	4,130	4,924	4,201	3,114	2,492	287	350	348	134	16	23	20,019
Hauraki District	314	127	245	127	139	24	4	5	1	0	0	986
Waikato District	809	996	640	1,850	2,726	459	172	33	7	17	0	7,709
Matamata-Piako District	64	259	90	27	45	30	10	65	2	0	0	592
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	1,558	1,318	2,582	1,721	904	607	86	47	3	2	3	8,831
Rotorua District	4,697	3,870	5,434	5,135	2,181	1,075	66	42	24	0	5	22,529
Kawerau District	0	0	0	0	0	37	0	0	0	0	0	37
Whakatane District	13,125	15,888	10,103	14,505	5,262	156	53	31	10	1	9	59,143
Opotiki District	4,224	2,071	706	673	678	423	1,888	116	10	0	0	10,789
Waipa District	29	41	31	124	119	20	4	3	0	0	2	373
Otorohanga District	0	0	146	508	715	17	71	3	5	0	0	1,465
Waitomo District	246	2,163	2,142	1,129	1,964	94	153	47	8	0	0	7,946
Ruapehu District	9,389	3,917	1,867	9,099	7,939	1,361	1,384	221	28	1	0	35,206
South Waikato District	7,451	6,646	11,261	13,416	10,417	2,977	33	22	34	0	77	52,334
Taupo District	19,951	7,921	11,133	13,620	10,482	3,722	233	83	17	50	24	67,236
Region total	65,987	50,141	50,581	65,048	46,063	11,289	4,507	1,066	283	87	143	295,195
East Coast wood supply region												
Gisborne District	6,720	7,798	6,634	9,270	6,850	2,075	2,431	1,704	737	16	8	44,243
Region total	6,720	7,798	6,634	9,270	6,850	2,075	2,431	1,704	737	16	8	44,243
Hawke's Bay wood supply region												
Wairoa District	415	2,712	2,079	1,443	2,539	24	473	116	17	1	3	9,821
Hastings District	3,890	5,864	5,385	4,971	4,601	313	70	99	81	16	10	25,300
Napier City	0	0	0	0	1	0	6	0	0	0	0	7
Central Hawke's Bay District	246	239	198	1,933	964	230	175	46	63	14	6	4,114
Region total	4,551	8,815	7,662	8,347	8,105	567	724	261	161	31	19	39,242
Southern North Island wood supply region												
New Plymouth District	26	60	68	145	271	84	26	20	30	0	0	730
Stratford District	268	0	100	79	218	14	4	10	0	0	0	693
South Taranaki District	2	57	213	311	886	297	190	84	37	1	3	2,081
Wanganui District	C	1,004	C	1,284	1,731	54	23	87	7	0	9	6,021
Rangitikei District	768	259	276	2,567	1,131	70	94	97	197	95	0	5,554
Manawatu District	413	132	215	380	745	80	73	79	27	2	5	2,151
Kapiti Coast District	0	0	76	166	13	158	234	21	0	0	0	668
Upper Hutt City	740	560	279	645	410	340	217	83	90	9	6	3,378
Porirua City	0	0	7	25	136	237	5	0	64	0	0	474
Wellington City	0	0	0	16	23	19	0	0	0	0	0	58
Lower Hutt City	0	0	0	0	28	0	58	17	6	0	0	109
Palmerston North City	6	453	40	35	65	13	24	82	37	0	0	755
Tararua District	C	460	C	2,300	3,639	192	341	172	73	21	7	10,081
Masterton District	380	426	546	986	1,851	503	693	177	243	94	4	5,903
Horowhenua District	35	306	480	157	455	46	98	63	30	0	7	1,677
Carterton District	217	159	282	858	528	162	55	30	93	2	1	2,387
South Wairarapa District	741	124	444	692	1,230	734	186	95	89	5	1	4,341
Region total	6,850	4,000	4,470	10,646	13,360	3,003	2,321	1,117	1,023	229	43	47,061
North Island total	111,658	90,401	84,550	108,263	88,829	22,881	14,901	4,690	2,691	404	227	529,495



	Age class (years)											Total (ha)
	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)	61-80 Years (ha)	
Nelson and Marlborough wood supply region												
Nelson City	864	2,148	1,411	1,304	1,207	320	49	27	12	1	0	7,343
Tasman District	9,093	13,288	13,823	7,758	9,038	2,014	466	405	272	35	14	56,206
Marlborough District	10,898	5,832	4,835	3,729	7,376	961	728	344	188	32	2	34,924
Kaikoura District	0	0	12	30	25	1	16	14	0	2	0	100
Region total	20,855	21,268	20,081	12,821	17,645	3,296	1,259	790	472	70	16	98,572
West Coast wood supply region												
Buller District	647	565	154	81	145	57	75	88	19	0	0	1,831
Grey District	1,658	1,290	1,504	399	291	70	167	191	77	40	0	5,687
Westland District	770	1,327	590	382	95	17	0	161	218	1	0	3,561
Region total	3,075	3,182	2,248	862	531	144	242	440	314	41	0	11,079
Canterbury wood supply region												
Hurunui District	2,297	1,925	4,178	5,908	4,579	1,570	267	114	5	9	6	20,859
Waimakariri District	378	415	606	1,275	1,719	84	55	27	22	36	0	4,616
Christchurch City	227	293	239	244	441	250	153	87	20	1	22	1,977
Selwyn District	897	605	339	655	1,398	993	391	103	58	16	0	5,454
Ashburton District	255	348	230	186	205	15	50	12	11	8	20	1,340
Timaru District	210	139	66	196	878	236	63	10	11	0	0	1,809
Mackenzie District	11	37	22	60	227	21	12	5	43	13	0	451
Waimate District	589	534	240	356	570	144	159	137	31	23	14	2,797
Region total	4,863	4,296	5,920	8,880	10,018	3,313	1,150	495	201	106	62	39,303
Otago and Southland wood supply region												
Waitaki District	1,894	277	600	683	928	198	188	45	32	27	2	4,874
Dunedin City	3,422	1,803	C	84	C	84	153	68	0	13	1	6,370
Queenstown-Lakes District	0	0	10	13	25	11	6	13	1	20	6	105
Central Otago District	0	0	C	65	C	20	41	36	10	4	13	630
Clutha District	2,430	3,167	5,119	4,226	2,613	1,024	323	172	62	13	3	19,152
Gore District	0	6	35	321	451	34	22	29	26	1	0	925
Southland District	2,710	2,063	3,943	5,052	4,737	714	1,101	204	209	16	2	20,751
Invercargill City	0	0	2	4	0	10	8	2	0	0	0	26
Region total	10,456	7,316	9,951	10,448	9,695	2,095	1,842	569	340	94	27	52,833
South Island total	39,249	36,062	38,200	33,011	37,889	8,848	4,493	2,294	1,327	311	105	201,787
New Zealand total	150,906	126,462	122,750	141,274	126,718	31,729	19,394	6,984	4,018	715	332	731,282

Figure 26: Distribution of radiata pine unpruned without production thinning forest area by age class and island, as at 1 April 2017



# 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 2017 if it was planted in the preceding 12-month period, that is, between 1 April 2016 and 31 March 2017.

**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 and the Ministry for Primary Industries (MPI) have agreed that the Steering Committee shall:

1. Produce a five-year strategic plan, which outlines long term strategies to maintain the quality of planted production forest resource information collected and plans for projects of a longer-term nature such as wood supply forecasts. This strategic plan needs to be submitted to the Ministry for Primary Industries Deputy Director-General of Policy and the Board of the New Zealand Forest Owners' Association.
2. Prepare an annual work plan and budget for NEFD activity, outlining details of statistics to be collected, how they are to be handled, the analysis to be performed and products to be produced during the year. This work plan is to be submitted to the Ministry for Primary Industries Deputy Director-General of Policy and to the Board of the New Zealand Forest Owners' Association by 31 May of each year (Review and approval by the Deputy Director-General and the Board are required by 30 June of that year).
3. Prepare an annual report reviewing the year's work and achievements. This report is to be submitted to the Deputy Director-General for Primary Industries and to the Board of the New Zealand Forest Owners' Association by 31 July each year.
4. Monitor user satisfaction with the NEFD outputs through the use of client surveys and through direct discussion with user representatives.
5. Advise the MPI Senior Leadership Team and the Board of the FOA of any significant issues that the Steering Committee is unable to resolve.
6. Oversee the preparation of each edition of the National Exotic Forest Description.
7. Commission forecasts of future wood supply from New Zealand's planted production forests.
8. Ensure that all users are able to subscribe to NEFD reports on an equitable basis, with no barriers to access.
9. Advertise and promote the availability of NEFD reports.
10. Commission research by suitable bodies to improve the quality of NEFD information.

# Appendix 3: NEFD Steering Committee

The NEFD Steering Committee currently comprises fourteen representatives nominated by the NZ Forest Owners' Association and the Ministry for Primary Industries. The current members are:

Member	Nominated By
Alan Bell Alan Bell & Associates	New Zealand Forest Owners Association
Jo Drabsch Rayonier New Zealand Ltd	New Zealand Forest Owners Association
Sarah Clough Ministry for Primary Industries	Ministry for Primary Industries
Stephen Groves Statistics New Zealand	Ministry for Primary Industries
Ian Hinton (Chairman) Timberlands Ltd	New Zealand Forest Owners Association
Ross Jones Hancock Forest Management	New Zealand Forest Owners Association
Paul Lane Ministry for Primary Industries	Ministry for Primary Industries
Hamish Levack Farm Forestry Association	Ministry for Primary Industries
Peter Lough Ministry for Primary Industries	Ministry for Primary Industries
Bruce Manley School of Forestry, University of Canterbury	Ministry for Primary Industries
John Moore SCION	Ministry for Primary Industries
Stephen Murray Ministry for Primary Industries	Ministry for Primary Industries
John Novis Ministry for Primary Industries	Ministry for Primary Industries
Peter Oliver City Forests Association	New Zealand Forest Owners

# Appendix 4: References

AgriQuality New Zealand (2005) *Small Forest Grower Survey Report*.

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New Zealand Forest Owners Association (2018) *New Zealand Forest Industry Facts & Figures 2016/2017*.

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[http://www.stats.govt.nz/browse\\_for\\_stats/industry\\_sectors/agriculture/agriculturalproduction\\_hotpjun07final.aspx](http://www.stats.govt.nz/browse_for_stats/industry_sectors/agriculture/agriculturalproduction_hotpjun07final.aspx)

Statistics New Zealand (2010) 2010 Agricultural Production Survey. <http://www.stats.govt.nz>

Statistics New Zealand (2011) 2011 Agricultural Production Survey. <http://www.stats.govt.nz>



# Appendix 5: National Exotic Forest Description Technical Report

Version 2017

- 5.1 Introduction
  - 5.2 Data collection
    - 5.2.1 Comparing data collected from sources other than the nefd
  - 5.3 Reliability of data
    - 5.3.1 Reliability of data from large-scale forest owners
    - 5.3.2 Reliability of data from smaller scale owners
    - 5.3.3 Reliability of data below national level
    - 5.3.4 Quality assurance of nefd survey data
  - 5.4 Data for forests smaller than 40 hectares
    - 5.4.1 New planting imputations- 1992 to 2006
    - 5.4.2 2004 Asurequality small forest grower survey
    - 5.4.3 Small owner estate
  - 5.5 Scaling of planting and harvesting data in non-census years
  - 5.6 Yield tables
- NEFD survey template 2017

## 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 Ministry for Primary Industries' website: <http://www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/forestry/new-zealands-forests/>

## 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 Table 1). Respondents either complete the survey via a postal survey or they can complete it online.

### NEFD survey cycle

Year	2017	2018	2019	2020
Survey frame	Only foresters with 1,000 or more hectares of forests <sup>1</sup>	All known foresters with 40 or more hectares of forests	Only foresters with 1,000 or more hectares of forests <sup>1</sup>	All known foresters with 40 or more hectares of forests

#### Note

1. The survey is run as a census every two years, as approximately 70 percent of forestry does not change year to year. Large owners are surveyed every year, as they own approximately 84 percent of New Zealand's forests.

In addition to the data collected in the NEFD surveys, the results from the 2004 AgriQuality (nowASUREQuality) 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 MPI's website: <http://www.mpi.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 1990-2012 (LUM v010) – see: <https://data.mfe.govt.nz/layer/52375-lucas-nz-land-use-map-1990-2008-2012-v016/>. 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 less than 1,000 hectares made up 30 percent of the national forest estate in 2017. 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 less 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
999 ha to 40 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 2017 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 new 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 than 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. Multiple 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
- $$\begin{aligned} \text{Scaled replanting} &= \text{current year} * \\ &(\text{census year total/census} \\ &\text{year 1,000 +}) \\ &= 900 * (1,000/800) \\ &= 900 * 1.25 \\ &= 1,125 \end{aligned}$$

## Yield tables

Standing volumes from the 2014 NEFD onwards have been calculated using the yield tables produced during the 2005-2009 Wood Availability Forecasting project. 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 2006 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 2009 Wood Availability Forecasts.

The impact of moving from the 1995 to the 2009 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 wind throw and crop failure, compared to previous models.



# ANNUAL SURVEY FOR NATIONAL EXOTIC FOREST DESCRIPTION AS AT 1 APRIL 2017

Please check the contact details here are correct. If they are not, please update them in question A1.

Please complete and return this questionnaire no later than **Thursday 29 June 2017.**

## Purpose

The purpose of this survey is to maintain a quantitative database of New Zealand's planted production forests. The aggregated information is used extensively by government and the wider forestry sector for wood availability forecasting, infrastructural planning and to help develop policies affecting the forest sector. The survey is split into four sections:

- |                  |   |
|------------------|---|
| <b>Section A</b> | This section asks you to check your contact details and helps you work out which parts of the form you need to fill in. No contact information will go into any publication.  |
| <b>Section B</b> | This section collects area by age data that is used for regional wood availability forecasting, forest area and volume calculations. This section may contain pre-printed pages, these will need checking. Information is published at the Territorial Authority level. |
| <b>Section C</b> | This section records changes in forest area and collects information on planting, harvesting and land use change. The information collected is published at the national level.   |
| <b>Section D</b> | This section collects information about the use of contact information during an emergency event and feedback from you. Information in this section does not go into any publication.   |

## Confidentiality

All responses to this survey will be treated as confidential and used only for statistical purposes. Information provided is aggregated to prepare publications. 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**

tel: NEFD survey support direct dial (04) 894 0001, or free phone MPI general enquires, 0800 008 333 and ask to speak to NEFD survey support (you may need to leave a message)  
email: NEFD@mpi.govt.nz  
mail: Survey Support, NEFD, Ministry for Primary Industries, PO Box 2526, Wellington 6140

Martyn Dunne  
Director-General of the Ministry for Primary Industries

David Rhodes  
New Zealand Forest Owners' Association

FOR ASSISTANCE PLEASE > refer to the glossary > Contact survey support (see front page)

## SECTION A: CONTACT DETAILS

Work through the questions on this page to see which sections you need to complete

**A1** Check the front cover of the survey. Are your contact details correct?

Please add or correct any details you need to.

We use this information to know who to contact if we have any queries about the information you have provided.

Contact name Please include your first name and surname	
Company name	
Contact address	
Contact phone number	
Email address	

**A2** Do you, or the company you may work for, own the forest you are going to answer the survey about?

Please tick 'Yes' if you part-own the forest, or are part of a joint venture.

☐ Yes ► Go to **A4**

☐ No ► Go to **A3**

**A3** Please enter the details of the forest 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 phone number	
Email address	

**A4** Tick one category only. Which best describes the ownership of the majority of this forest?

☐ privately owned

☐ registered public company

☐ local government

☐ central government

☐ state owned enterprise

☐ other (please specify)

☐ Maori Trust

\_\_\_\_\_

## SECTION A: CONTACT DETAILS continued

**A5** Between 1 April 2016 and 31 March 2017, have any of the following been done to the forest, or forest land, you are completing this survey for?

Purchased, leased or sold or handed back any forest or forest land.

Exclude: Land you have sold or handed back but still retain rights to the forest

☐ Yes ► Go to **Section B** we will contact you to update our records

☐ No ► Go to **A6**

**A6** Is this total forest area over 1,000 hectares?

☐ Yes ► Go to **Section B**

☐ No ► Go to **A7**

**A7** Between 1 April 2016 and 31 March 2017, have any of the following been done to the forest, or forest land, you are completing this survey for?

Planting, Harvesting, Pruning, Thinning, or damage from fire or wind.

☐ Yes ► Go to **Section B**

☐ No ► Go to **A8**

**A8** Because there have been no changes to your forest between 1 April 2016 and 31 March 2017, you just need to do three things:

- check any pre-printed pages you have received are correct

If there are errors on your pre-printed pages, please make the corrections on the pages and send them back with your survey, or contact survey support (see front page).

- tick the box below
- complete Section D and return your form.

Alternatively, you can contact survey support (see front page) providing all the details on this page (including your answer to Section D).

☐ There have been no changes to my forest. ► Go to **Section D**



## SECTION B: AREA BY AGE DATA AS AT 1 APRIL 2017

### Supplying the data electronically

- The data requested in Section B can be supplied electronically.
- Please contact survey support (see front page).

### Pre-printed pages

#### **B1** Are there any pre-printed pages included with your survey?

The pre-printed pages will contain data from your previous NEFD survey.

- If you have forest area that is not included in your pre-printed pages you need to fill in questions **B2** to **B7** with the additional forest information.

☐ Yes ► Check the pre-printed data on each page. If there are errors, correct them.  
If the data is correct, tick the 'no changes' box on each of the pre-printed pages,  
then go to **Section C**

☐ No ► Answer questions **B2** to **B7**

## SECTION B: continued AREA BY AGE DATA AS AT 1 APRIL 2017

### Instructions for questions B2 to B7

**B2** You need a copy of questions **B2** to **B7** for each forest area that has a different:

- Territorial Authority where the forest is located
- Rotation number (either first or second and subsequent rotations)
- Tending regime
- Species.

For more copies of **B2** to **B7** you can either:

- Make a photocopy of the pages provided containing questions B2 to B7.
- Contact survey support (see front page)

Write the Territorial Authority where the forest is located in the box below:

Note: A Territorial Authority is not a Regional Council boundary. Please see the attached supplement 'Map of wood supply region boundaries and territorial authority boundaries' for more information.

**B3** Tick one category only. Which rotation is this?

- ☐ First rotation (area planted in forest for the first time)
- ☐ Second or subsequent rotation (area replanted following harvesting of existing planted forest)

**B4** Tick one category only. Which species is this information for?

- ☐ Radiata pine      ► Go to **B5**
- ☐ Douglas-fir      ► Go to **B6**
- ☐ Cypress species  
includes macrocarpa, lusitanica and other cypress species
- ☐ Other softwoods  
includes conifers e.g. pine (excluding radiata pine), fir (excluding douglas-fir), larch or redwood
- ☐ Eucalypt  
includes all eucalypt species
- ☐ Other hardwoods  
includes broad-leaved trees e.g. wattle, acacia (including Australian blackwood), walnut, oak, poplar, willow, paulownia, birch, alder or elm

Go to **B7**

## SECTION B: continued AREA BY AGE DATA AS AT 1 APRIL 2017

### Tending Regime

**Intended tending regime:** for young stands that you intend to prune at a later date, please include as "pruned".

**Production thinning:** Where thinnings are sold, e.g. for posts or chipwood. Don't include thinning to waste.

**B5** Tick an answer in each category.  
What is your radiata pine tending regime or intended tending regime for this forest?

Pruning Regime

- ☐ pruned  
☐ unpruned

Thinning Regime

- ☐ production thinned  
☐ no production thinning

Thank you now go to



**B7**

**B6** Tick one category only. What is your douglas-fir tending regime or intended tending regime for this forest?

- ☐ production thinned  
☐ no production thinning

### Age by age information

**B7** As at 1 April 2017, give the net stocked area in hectares of trees of each age.

Hectares may be given to one decimal point.

Make sure you write the 'Total Net Stocked Area' in the highlighted box at the bottom of this table once it is complete.

Year Planted	Age in 2018	Net stocked area (Ha)	Year Planted	Age in 2018	Net stocked area (Ha)	Year Planted	Age in 2018	Net stocked area (Ha)	Year Planted	Age in 2018	Net stocked area (Ha)
2017	1		1996	22		1975	43		1954	64	
2016	2		1995	23		1974	44		1953	65	
2015	3		1994	24		1973	45		1952	66	
2014	4		1993	25		1972	46		1951	67	
2013	5		1992	26		1971	47		1950	68	
2012	6		1991	27		1970	48		1949	69	
2011	7		1990	28		1969	49		1948	70	
2010	8		1989	29		1968	50		1947	71	
2009	9		1988	30		1967	51		1946	72	
2008	10		1987	31		1966	52		1945	73	
2007	11		1986	32		1965	53		1944	74	
2006	12		1985	33		1964	54		1943	75	
2005	13		1984	34		1963	55		1942	76	
2004	14		1983	35		1962	56		1941	77	
2003	15		1982	36		1961	57		1940	78	
2002	16		1981	37		1960	58		1939	79	
2001	17		1980	38		1959	59		1938	80	
2000	18		1979	39		1958	60		1935 or earlier	80+	
1999	19		1978	40		1957	61		Total Net Stocked Area		
1998	20		1977	41		1956	62				
1997	21		1976	42		1955	63				

## SECTION C: PLANTING AND HARVESTING

### Planting

#### C1 Does any of the forest area you are answering this survey about cover multiple Territorial Authorities?

Note: A Territorial Authority is not a Regional Council boundary. Please see map included with your survey for more information.

☐ Yes ► You need to answer questions C2 to C14 for each TA your forest is in

☐ No ► Go to **C2**

For more copies of **C2** to **C14** you can either:

- Make a photocopy of the pages provided containing questions B2 to B7.
- Contact survey support (see front page)

#### C2 Between 1 April 2016 and 31 March 2017, was there any planting in this forest?

☐ Yes ► Go to **C3**

☐ No ► Go to **C6**

#### C3 Write the Territorial Authority where the planting took place in the box below:

Please see the attached supplement 'Map of wood supply region boundaries and territorial authority boundaries' for more information.

#### C4 Complete the table below with the new and replanted area for the year ended 31 December 2016.

	New Planted area for year ended 31 December 2016 Give the area planted on a site not already in use for growing planted production forest (i.e. first rotation)	Area replanted for year ended 31 December 2016 Give the area of forest which was replanted following harvest
Radiata pine	<input type="text"/> ha	<input type="text"/> ha
Douglas-fir	<input type="text"/> ha	<input type="text"/> ha
Cypress species includes macrocarpa, lusitanica and other cypress species	<input type="text"/> ha	<input type="text"/> ha
Other softwoods include: conifers e.g. pine, fir, larch and redwood exclude: radiata pine, douglas-fir	<input type="text"/> ha	<input type="text"/> ha
Eucalypt include: all eucalypt species	<input type="text"/> ha	<input type="text"/> ha
Other hardwoods include: broad-leaved trees e.g. wattle, acacia (including Australian blackwood), walnut, oak, poplar, willow, paulownia, birch, alder or elm	<input type="text"/> ha	<input type="text"/> ha
TOTAL	<input type="text"/> ha	<input type="text"/> ha

#### C5 Write the number from the 'Total new planted area' (highlighted dark blue) in **C4** above into the 'Total' box in this question, then separate it into categories of pasture and vegetation.

Improved pasture land that has been fertilised and contains improved pasture species	<input type="text"/> ha
Unimproved pasture land not fertilised, with no improved pasture species sown	<input type="text"/> ha
Woody vegetation land predominantly covered in bracken gorse, manuka, kanuka, or other woody species	<input type="text"/> ha
TOTAL – note, this total should equal the 'new planted area' in question <b>C4</b>	<input type="text"/> ha

## SECTION C: continued PLANTING AND HARVESTING

### Harvesting

**C6** Only thinking about the forest area you are answering these questions for, between 1 April 2016 and 31 March 2017, did you carry out any harvesting?

☐ Yes ► Go to **C7**

☐ No ► Go to **C10**

**C7** Write the Territorial Authority where the harvesting took place in the box below:

Note: A Territorial Authority is not a Regional Council boundary. Please see 'Map of wood supply region boundaries and territorial authority boundaries' included with your survey for more information.

☐ Tick here if it is the same Territorial Authority as the planting in question **C3**

**C8** For the year ended 31 March 2017, please give the following harvesting details:

	Area clear felled <small>include any salvage logging of windthrown or other damaged trees</small>	Clear felled volume <small>the recovered volume of wood (inside bark) from harvesting or clear felling (see glossary for details)</small>	Average age clear felled (area-weighted) <small>the average age of harvested stands weighted by the area of each stand (see glossary for details)</small>	Production thinning volume (recovered) <small>the recovered volume of wood (inside bark) from thinning for commercial use (see glossary for details)</small>
Radiata pine	<input type="text"/> ha	<input type="text"/> m3	<input type="text"/> years	<input type="text"/> m3
Douglas-fir	<input type="text"/> ha	<input type="text"/> m3	<input type="text"/> years	<input type="text"/> m3
Cypress species <small>includes macrocarpa, lusitanica and other cypress species</small>	<input type="text"/> ha	<input type="text"/> m3	<input type="text"/> years	<input type="text"/> m3
Other softwoods <small>include: conifers e.g. pine, fir, larch and redwood exclude: radiata pine, douglas-fir</small>	<input type="text"/> ha	<input type="text"/> m3	<input type="text"/> years	<input type="text"/> m3
Eucalypt <small>include: all eucalypt species</small>	<input type="text"/> ha	<input type="text"/> m3	<input type="text"/> years	<input type="text"/> m3
Other hardwoods <small>include: broad-leaved trees e.g. wattle, acacia (including Australian blackwood), walnut, oak, poplar, willow, paulownia, birch, alder or elm</small>	<input type="text"/> ha	<input type="text"/> m3	<input type="text"/> years	<input type="text"/> m3

**C9** Write the number from the radiata pine clear felled volume (highlighted dark blue) in **C8** above into the 'Total recovered' box below. Then separate it into log grade sold.

Export logs should be included in the log grades e.g. if a pruned log is exported as an unpruned grade, please record as "unpruned" (see glossary for definitions).

Volume (recovered) sold as

Pruned Logs	<input type="text"/> m3	+	Unpruned sawlogs	<input type="text"/> m3	+	Pulp/chip logs	<input type="text"/> m3	=	Total recovered	<input type="text"/> m3
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## SECTION C: continued PLANTING AND HARVESTING

If area equals zero then please write zero in the box provided.

**C10** Between 1 April 2013 and 31 March 2017 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 landowner

ha

**C11** Between 1 April 2013 and 31 March 2017 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 **C10** and land handed back to landowner

ha

**C12** Between 1 April 2016 and 31 March 2017, 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 landowner

☐ Yes ► Go to **C13**

☐ No ► Go to **D1**

**C13** Between 1 April 2016 and 31 March 2017, what area of harvested forest 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 less than age 20

ha

**C14** Between 1 April 2016 and 31 March 2017, what area of immature forest was converted to a non-forest land use?

Include:

- forests less than age 20 including those on land that is in the process of being converted
- immature forests such as short rotation eucalypts

Exclude: mature forests that you talked about in question **C13**

ha

## SECTION D: CONTACT IN AN EMERGENCY AND FEEDBACK

## Approval to access contact details in the event of an emergency

**D1** I agree to the Ministry for Primary Industries and allied organisations using my name, contact details and total forest area (as reported in this questionnaire) for fire, biosecurity and emergency events only.

☐ Yes

☐ No

☐ No

## Helping us find forests

To make sure we don't miss out any forests we should be counting, if you own or manage any forests over 40 hectares that you don't receive an NEFD survey for, please let us know by contacting survey support (see front page).

– if you call, one of our NEFD team members will be happy to talk to you, or you can leave us a message.

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## Your comments and feedback

[illegible][illegible]This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.

**Thank you for taking the time to complete this NEFD survey**



## FOREST AREA RECONCILIATION

MPI uses the following reconciliation table to check that data supplied reconciles. We suggest you use this table to check your responses as this will minimise the amount of post-survey follow up work required.

### 2016 Information

This information can be found in your previous NEFD return

<b>Net stocked area as at 1 April 2016</b>		<input type="text"/>	ha
Area awaiting replanting on 31 March 2016	+	<input type="text"/>	ha
Area awaiting a land use decision on 31 March 2016	+	<input type="text"/>	ha
<b>TOTAL forest area as at 1 April 2016</b>	=	<input type="text"/>	ha

### 2017 Information

This information can be found in this questionnaire

Forest area acquired	+	<input type="text"/>	ha	
New planted area (first rotation)	+	<input type="text"/>	ha	<b>C4</b>
Forest area sold	-	<input type="text"/>	ha	
Forest area another party now responsible for (for example, area handed back)	-	<input type="text"/>	ha	
Clear felled area now converted to a non-forest land use	-	<input type="text"/>	ha	<b>C13</b>
Immature forest cleared for conversion to a non-forest land use	-	<input type="text"/>	ha	<b>C14</b>
Re-mapping adjustment	+ / -	<input type="text"/>	ha	Pls circle + or -
<b>Net stocked area as at 1 April 2017</b>	=	<input type="text"/>	ha	<b>B7</b>
Area awaiting replanting on 31 March 2017	+	<input type="text"/>	ha	<b>C10</b>
Area awaiting land use decision on 31 March 2017	+	<input type="text"/>	ha	<b>C11</b>
<b>TOTAL forest area as at 1 April 2017</b>	=	<input type="text"/>	ha	

This is the end of the questionnaire

### Returning the survey

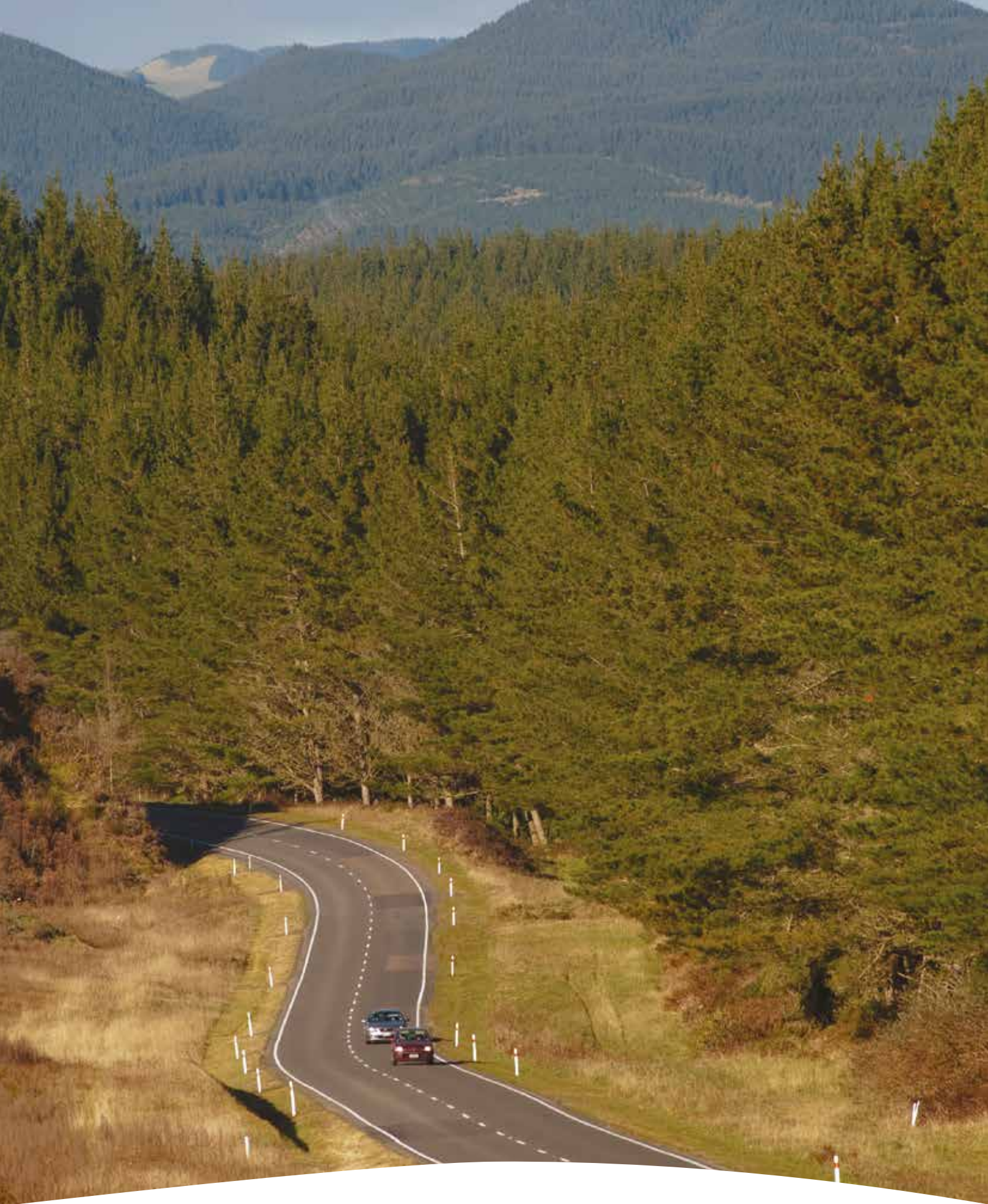
Make sure you have answered **Section D**

Please return all the copies of all the forms you have used, as well as the forms sent to you as part of the questionnaire.  
Please return the survey to NEFD Survey Support (see front page for contact details).

### THANK YOU FOR YOUR SUPPORT

A copy of the complete results from last year's NEFD survey is available free of charge on the Ministry's website:  
<http://www.mpi.govt.nz/news-and-resources/statistics-and-forecasting/forestry>  
or by emailing [brand@mpi.govt.nz](mailto:brand@mpi.govt.nz)





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New Zealand Government