

NATIONAL EXOTIC FOREST DESCRIPTION AS AT 1 APRIL 2016

ACKNOWLEDGEMENTS

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ENQUIRIES

Further copies can be obtained from www.mpi.govt.nz.

For more information see page 73 for contacts.

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INTRODUCTION

1

This is the 33rd edition of the *National Exotic Forest Description (NEFD)*. The report provides a detailed description of New Zealand's production forests as at 1 April 2016. It represents an estimate of the net stocked area of the planted production exotic forest estate with the primary intention of producing wood or wood fibre.

New Zealand's planted production forest description is published annually to assist with resource policy planning and development. It provides data for government policy advice, 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.

The report provides:

- an overview of New Zealand's planted production forests;
- a description of survey methods, sources of information and details on the reliability of the data;
- statistical tables that describe New Zealand's planted production forest area in detail;
- forest activity data such as planting and harvesting statistics.

Much of this report's content consists of detailed tables that show the planted production forest area by age class and territorial authority. This information is provided for key species. For radiata pine, the area by age class tables are also provided by silviculture regime.

Collecting and publishing 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 (see *Appendix 4*).

Each year the NEFD area dataset is compiled from a survey of forest owners and consultants who own or manage planted production forests. The yield tables are produced periodically based on data provided by forest owners and managers of larger forests.

An electronic copy of this report is available on the Ministry for Primary Industries website (www.mpi.govt.nz). The tables from this electronic report can be downloaded as Microsoft Excel files.

Please note this is a technical report aimed at those who have a working knowledge of New Zealand's planted production forests and who work in forestry related industries, government agencies and research organisations in New Zealand. For further clarification of the content of this report, please email stats_info@mpi.govt.nz.

OVERVIEW

2

KEY FACTS

- New Zealand's net stocked planted production forests covered an estimated 1.70 million hectares as at 1 April 2016.
- The total planted forest standing volume is estimated to be 503 million cubic metres with an average forest standing age (area weighted) of 17.1 years.
- As at 1 April 2016, New Zealand's net stocked forest area has decreased by 13 000 hectares from 1 April 2015.
- Harvested areas awaiting either replanting or a land use decision decreased by 3000 hectares in the year to 1 April 2016.

Table 2.1 (page 3) provides key national forestry statistics as at 1 April 2016 and compares these with statistics for 2015.

Figure 2.1 shows the age structure of the New Zealand planted forest estate. Radiata pine is typically harvested between 26 and 32 years old. Areas of forest planted in the mid-1980s have now reached harvest age. Also, the large areas of forest planted between 1992 and 1998, now 18 to 24 years old, are very apparent. These areas are expected to begin reaching harvest age from around 2018.

FIGURE 2.1: TOTAL ESTIMATED PLANTED PRODUCTION FOREST AREA BY AGE CLASS, AS AT 1 APRIL 2016¹



Note

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

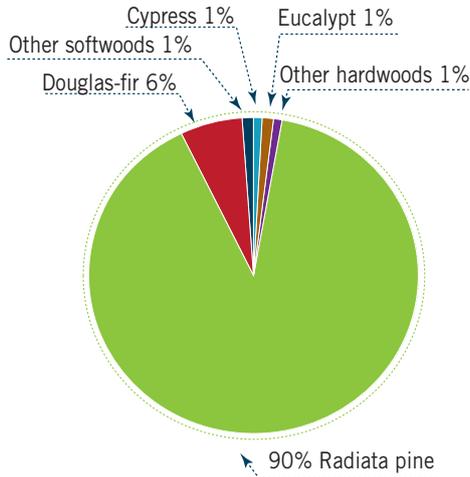
TABLE 2.1: NATIONAL EXOTIC FOREST ESTATE STATISTICS

AREA AND STANDING VOLUME STATISTICS	AS AT 1 APRIL 2015 ⁴	AS AT 1 APRIL 2016
FOREST AREA		
Net stocked area (ha)	1 717 715	1 704 747
Harvested area awaiting replanting (ha) ¹	53 903	50 491
Total forest area	1 771 618	1 755 238
GROWTH CHARACTERISTICS		
Standing volume (000 m ³)	501 706	501 460
Average standing volume (m ³ /ha)	292	294
Area-weighted average age (years)	17.08	17.08
AREA BY SPECIES²		
Radiata pine (ha)	1 544 480	1 532 734
Douglas-fir (ha)	104 999	104 173
Cypress species (ha)	10 123	10 140
Other softwoods (ha)	22 361	22 743
Eucalyptus species (ha)	23 260	23 182
Other hardwoods (ha)	12 493	11 775
RADIATA PINE AREA BY TENDING REGIME		
Pruned with production thinning (ha)	173 538	158 197
Pruned without production thinning (ha)	637 597	619 747
Unpruned with production thinning (ha)	33 329	39 675
Unpruned without production thinning (ha)	700 016	715 116
PLANTING STATISTICS		
	YEAR ENDED 31 DECEMBER 2014	YEAR ENDED 31 DECEMBER 2015
NEW PLANTING³		
Total estimated new planting (ha)	2 500	3 000
Restocking (ha)	41 353	39 948
HARVESTING STATISTICS⁵		
	YEAR ENDED 31 MARCH 2015	YEAR ENDED 31 MARCH 2016
HARVESTING		
Area clear felled – all species (ha)	49 896	45 342
Area clear felled – radiata pine (ha)	46 045	42 567
Volume clear felled – all species (000 m ³)	26 492	25 008
Volume production thinned – all species (000 m ³)	325	419
Total volume removed – all species (000 m ³) ⁶	26 817	25 427
Average clear fell yield – all species (m ³ /ha)	537	552
Volume clear felled – radiata pine (000 m ³)	25 036	23 851
Average clear fell yield – radiata pine (m ³ /ha)	544	560
Area-weighted average clear fell age for radiata pine (years)	28.4	29.1

Notes

- 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.
- Individual entries may not add to totals due to rounding. Breakdowns by Territorial Authority can be found in chapter 9
- 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. The method used to estimate new planting is described on page 6 of this report.
- The 2015 survey only sought data from owners with 1000 hectares of forest or more. These estimates have been rated up based on the 2014 NEFD results for owners with less than 1000 hectares of forest.
- All volumes are reported as recovered volumes inside bark.
- These estimates are based on data collected in the 2016 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 total forest product outputs.

FIGURE 2.2: SPECIES DISTRIBUTION – 2016¹



Note
1. Other softwoods include cypress species.

SPECIES

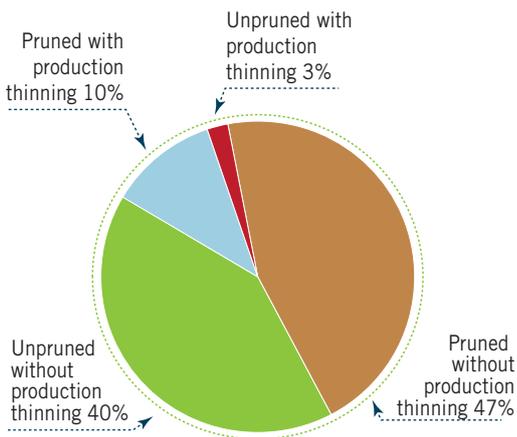
As seen in Figure 2.2, radiata pine is the dominant species, making up 90 percent of the planted production forest area. Newly planted areas of radiata pine were recorded in eastern and central parts of the North Island. In 2016, the total planted area of known radiata pine resource decreased by 12 000 hectares. Douglas-fir decreased in area by 800 hectares. Other softwoods and Cypress showed minor decreases in area, with Eucalyptus species and Other hardwoods showed slight increases.

SILVICULTURE

Figure 2.3 indicates that about 50 percent (780 000 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 within the industry away from intensively managed tending regimes.

- The area of production thinned forest decreased slightly from last year to approximately 13 percent of the radiata pine planted forest.
- Generally, the area of production thinned forest has declined over the past decade.
- Market demand for production thinnings and the current age structure of New Zealand forest resource to be thinned are likely to be factors in this decline.

FIGURE 2.3: RADIATA PINE BY TENDING REGIME – 2016



PLANTING

An estimated 3000 hectares of new forest were established in 2015. An estimated 39 950 hectares of previously clear felled planted forest were replanted in year ended December 2015, representing a 4 percent decrease in replanting from 2014.

Based on the results of the 2016 New Planting Survey it is provisionally estimated that 2 000 hectares of new forest were established during the 2016 calendar year.

FIGURE 2.4: NEW FOREST PLANTING 1920–2016^{P 1}



p Provisional

Note

1. This provisional estimate is compiled from a combination of information collected in a supplementary phone survey of selected large forest owners and East Coast Forestry Project planting. The final estimate of new planting in the December 2016 year will be collected in the 2017 NEFD survey.

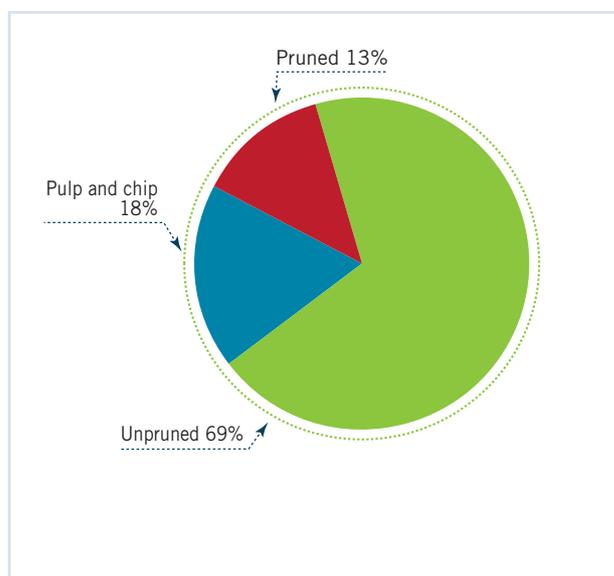
HARVESTING

An estimated harvesting volume of 25.5 million cubic metres¹ for the year ended March 2016 came from clear felling 45 300 hectares of planted forest, and 0.42 million cubic metres from production thinning.

While the total reported volume of wood harvested has decreased the average age at harvest for radiata pine has increased from 28.4 to 29.1 years in the year ended March 2016.

Of the radiata pine harvest, the proportion of pulp and chip logs has decreased from 27 to 18 percent over the last year. Approximately 13 percent was sold as pruned logs. Unpruned logs make up the balance of 69 percent, marking a slight increase of 8 percent from 2015.

FIGURE 2.5: RADIATA PINE HARVEST VOLUME BY LOG TYPE, YEAR ENDED 31 MARCH 2016



¹ These estimates are based on data collected in the 2016 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 total forest product outputs.

DATA

COLLECTION AND ESTIMATION

3

In 2016, NEFD questionnaires were sent to all known forest owners and managers with at least 40 hectares of planted production forest. The questionnaire used is shown in Appendix 2. For the 2016 NEFD survey, approximately 1700 questionnaires were sent out. An area weighted response rate of 94 percent was achieved.

In addition to the data collected in the NEFD surveys, the results from the 2004 AgriQuality (nowASUREQuality) Small Forest Grower Surveys continue to be used in the 2016 NEFD dataset. Details on the methods used by AgriQuality are available in the Small Forest Grower Survey Report (AgriQuality NZ, 2005). 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 survey methodologies and have different survey objectives.

The NEFD surveys all known forest owners and managers with at least 40 hectares of planted production forest every two years, and only large owners with 1000 hectares every other year. The target population for the 2016 NEFD survey was all known forest owners and managers with at least 40 hectares of planted production forest. The target population for the 2016 Agricultural Production Survey was all businesses engaged in “agricultural production activity” (including livestock, cropping, horticulture, and forestry) or owned land that was intended for agricultural activity. Detailed

TABLE 3.1: COMPARISON OF TOTAL NEW PLANTING WITH NEW PLANTING COLLECTED IN POSTAL SURVEYS

CALENDAR YEAR OF PLANTING	TOTAL NEW PLANTING ¹ (HA)	NEW PLANTING COLLECTED IN POSTAL SURVEYS ² (HA)	NEW PLANTING ADJUSTMENTS ³ (HA)
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	11 500	11 500	–
2013	3 500	3 500	–
2014	2 500	2 500	–
2015	3 000	3 000	–

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.

information on the population frame for the 2015 Agricultural Production Survey is available on the Statistics New Zealand website¹.

The forest areas released in the NEFD may also differ from those produced in the New Zealand Land Use Map 1990-2008 (LUM v010). 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.

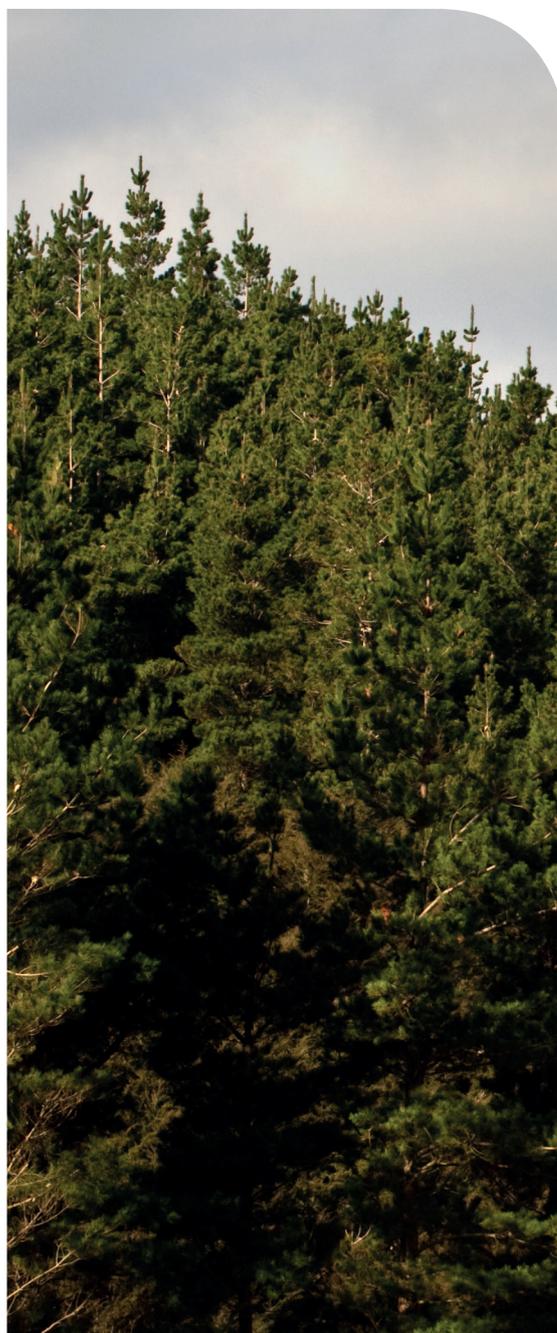
Sometimes harvested areas remain unstocked for up to three years before replanting occurs. Often these areas are not recorded year-to-year because the forest owners' tenancy ends at the completion of harvest and the land is returned to the land owners. The landowner or new tenant may not report the same 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 Table 2.1 is therefore not a reliable measure of the total forest area.

NEW PLANTING IMPUTATION

For the calendar years 1992 to 2006 additional new planting areas not directly captured in the NEFD surveys were estimated (imputed) based on the annual nursery survey. The methodology used to estimate this "missing" new planting is described in Appendix 3. No additional new planting imputations have been added since the 2006 calendar year.

Table 3.1 shows the comparisons of the new planting figures collected in the postal surveys to the total new planting figures.



¹ http://www.stats.govt.nz/browse_for_stats/industry_sectors/agriculture-horticulture-forestry/info-releases.aspx

DATA

DESCRIPTION

4

AREA DATA

The base unit for collecting and recording area data is the crop type. Up to ten crop types are recognised for each territorial authority, made up of four tending regimes for radiata pine, two tending regimes for Douglas-fir, and one each for cypress species, eucalypt species, other softwoods and other hardwoods. For definitions of crop type and tending regime, see *Appendix 1*.

The area data in the NEFD dataset is organised as a net stocked area for each age by crop type, and is labelled with a crop type code and a yield table code.

The area data is rounded to the nearest hectare and is recorded for ages one to 80 years.

The crop type code defines the territorial authority, the species group and the tending regime. The crop type is referenced to a specific table in the yield table database through the yield table code. This cross-reference is used to prepare composite datasets to calculate estimates of standing volumes and for providing input data for national and regional wood availability forecasts.

YIELD TABLES

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 and 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.

PLANTING AND HARVESTING DATA

Data has been collected on the area of restocking, new planting and land cover before the establishment of forests. 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 (see Table 2.1).

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).

OTHER ATTRIBUTES

The NEFD dataset includes information on forest ownership, classified as:

- registered public company;
- privately owned;
- state-owned enterprise;
- local government body;
- central government;
- Māori trust;
- other forms of ownership.

Each year, the NEFD Steering Committee considers the inclusion of any other relevant attributes before requesting data from forest owners.

NEW ZEALAND LAND USE MAP

The location of New Zealand's planted forests as identified in New Zealand Land Use Map 1990-2008 (LUM v010) is shown in Figures 8.1 and 8.2 in this report. Land Use Mapping is based on interpretation of satellite imagery and aerial photography. Further details about the New Zealand Land Use Map 1990-2008 (LUM v010) are available on the Ministry for the Environment website².

The Ministry for the Environment manages the New Zealand Land Use Map 1990-2008 (LUM v010).

² <http://www.mfe.govt.nz/issues/climate/lucas/data/land-use-mapping.html>

RELIABILITY

OF DATA

5

There are different levels of reliability associated with the net stocked area from each component of New Zealand's forest estate.

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.

Forest description data from large-scale owners is captured from an annual census. 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 1000 hectares made up 30 percent of the national forest estate in 2016. There are approximately 1580

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.

Table 5.1 shows total area represented from the 2016 NEFD survey and other NEFD data sources.

TABLE 5.1: TOTAL AREA REPRESENTED BY EACH DATA SOURCE IN THE 2016 NEFD DATABASE

DATA SOURCE	NET STOCKED AREA (000 HA)	PROPORTION OF TOTAL AREA (%) ¹	NUMBER OF OWNERS AT NATIONAL LEVEL
DATA COLLECTED IN THE NEFD SURVEY			
NEFD survey 10 000ha+	955	56	23
NEFD survey 1000-9999ha	239	14	75
NEFD survey 40-999ha	232	14	1 582
NEFD survey total²	1 425	84	1 680
NEFD resource <40ha	11	1	
New planting imputation (1992–2006) ³	203	12	..
2004 AgriQuality small forest growers(<40ha) ⁴	67	4	..
Total	1 706	100	..

Notes

1. Individual entries may not add to totals due to rounding.
2. Data collected from 2016 NEFD survey.
3. Adjustment made this year to the area of new forest planted between 1992 and 2006. New planting imputation is discussed on page 7 of this report.
4. *Small Forest Grower Survey Report*, AgriQuality New Zealand, April 2005.

Symbol

.. Not available.

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 SURVEYS

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

- Numeric data was limited to certain maximum and minimum values for each entry.
- Aggregated area data was checked at the territorial authority level against the 2015 NEFD area dataset to ensure variation was within acceptable limits.
- For each owner, the data provided in the 2016 survey was compared with data provided by that owner in the previous surveys.

It is possible that some owners included in the dataset may change their management objectives. For instance, an area that is reported as intended to be pruned may not end up being pruned.

YIELD TABLES

Standing volumes from the 2014 NEFD onwards have been calculated using the yield tables produced during the 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 to 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 takes events such as wind throw and crop failure, compared to previous models.

PLANTING AND HARVESTING ESTIMATES

6

NEW PLANTING AND REPLANTING ESTIMATES

The 2015 calendar year estimate of total planting is 42 950 hectares, representing a 2 percent decrease on 2014. This is made up of 3 000 hectares of new planting and 39 948 hectares of replanting.

Approximately 50 500 hectares of previously harvested forest was awaiting either replanting or a land use decision as at 1 April 2016. This is a decrease of over 3400 hectares on the previous year. It is provisionally estimated that 2 000 hectares of new planting occurred during the 2016 calendar year.

Table 6.1 shows in percentage terms the predominant land cover prior to planting since 1993.

The estimates of land cover prior to new planting are based solely on the new planting information collected in postal surveys (see Table 3.1). In some instances, postal survey respondents who had undertaken new planting did not state the land cover type prior to planting. While the sample size used to derive the proportions of land cover type prior to new planting is considered to be adequate, the estimates are biased towards the practices of the larger forest owners who are fully represented in the NEFD surveys.

For definitions of these land cover types, refer to Appendix 1.

TABLE 6.1: LAND COVER PRIOR TO NEW PLANTING

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	41	54	5	12 000
2012	61	32	7	11 500
2013	33	43	24	3 500
2014	13	79	8	2 500
2015	30	43	27	3 000

Note

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.

HARVESTING DATA

The 2016 NEFD survey respondents recorded a harvest volume for the year ended 31 March 2016 of 25.5 million cubic metres. It was reported that 25 million cubic metres came from clear felling 45 300 hectares of planted forest, and 0.42 million cubic metres from production thinning.

The total volume of radiata pine harvested in the year ended 31 March 2016 was 23.9 million cubic metres, from clear felling 42 600 hectares of forest. The area-weighted average clear fell age of radiata pine has increased from 28.4 years to 29.1 years in the year ended 31 March 2016.

Please note these harvesting volumes are lower than those reported in the Roundwood Removal Statistics published by MPI. The difference may be due to the NEFD only including harvest volume from forest 40 hectares or greater in size, as well as methodological differences between the two sources (see footnote 6 on table 2.1). Work to reconcile these differences is being planned.

WOOD AVAILABILITY FORECASTS

Wood availability forecasts for all regions and New Zealand are available on the MPI website³.

³ <http://www.mpi.govt.nz/news-and-resources/publications/>

FIGURE 6.1: HISTORICAL HARVESTING AREA 1990–2016

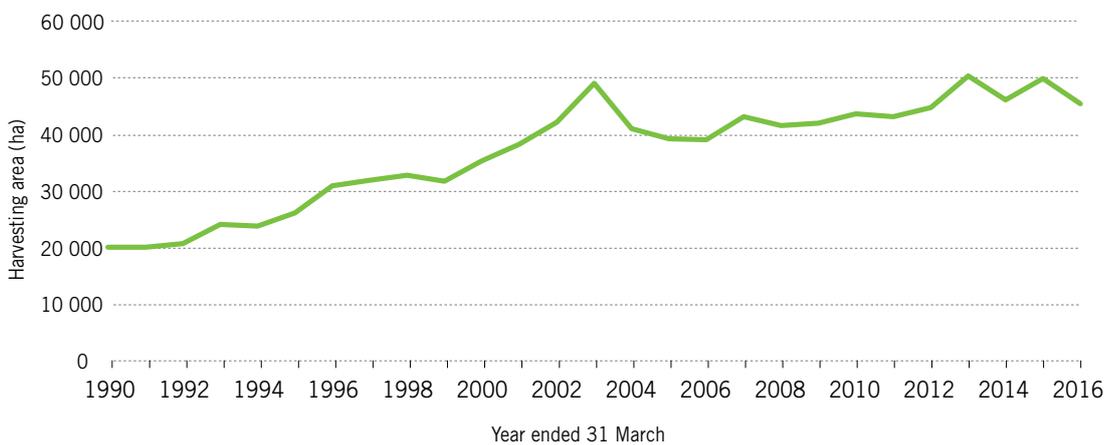
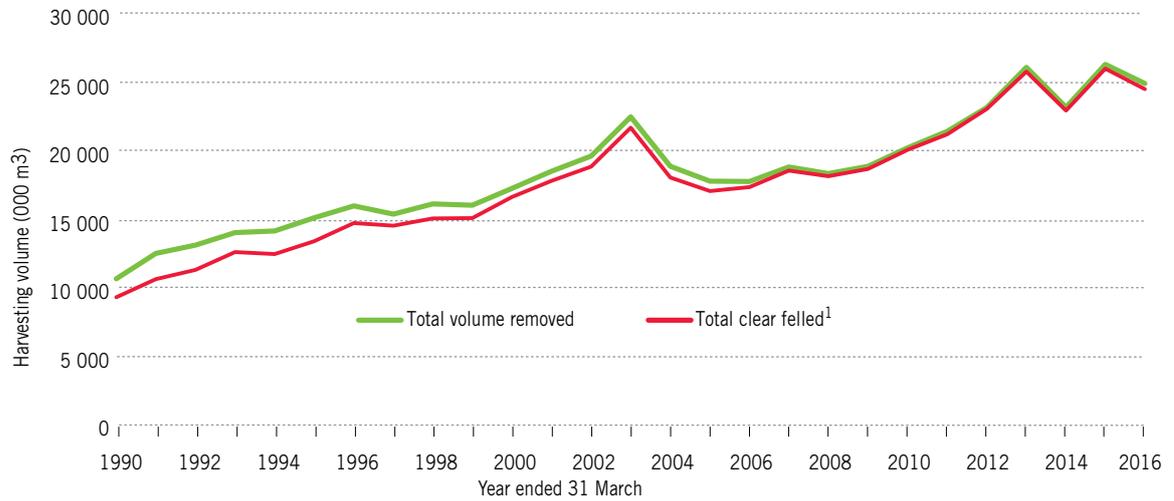


FIGURE 6.2: HISTORICAL HARVESTING VOLUME 1990–2016



Note

“Total clear felled” is the volume of wood removed excluding thinnings.

WOOD SUPPLY

REGIONS AND TERRITORIAL AUTHORITIES

7

This report is based on 66 district and city councils in New Zealand. The councils are grouped to form 9 wood supply regions of 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, Canterbury, West Coast, and Otago and Southland.

TABLE 7.1: WOOD SUPPLY REGIONS AND CONSTITUENT TERRITORIAL AUTHORITIES

WOOD SUPPLY REGIONS	TERRITORIAL AUTHORITIES
NORTH ISLAND	
NORTHLAND	Far North District Whangarei District Kaipara District Auckland Council
CENTRAL NORTH ISLAND	Thames–Coromandel District Hauraki District Waikato District Matamata–Piako District Hamilton City Waipa District Otorohanga District Waitomo District Ruapehu District South Waikato District Taupo District Tauranga District Western Bay of Plenty District Rotorua District Kawerau District Whakatane District Opotiki District
EAST COAST	Gisborne District
HAWKE'S BAY	Wairoa District Hastings District Napier City Central Hawke's Bay District

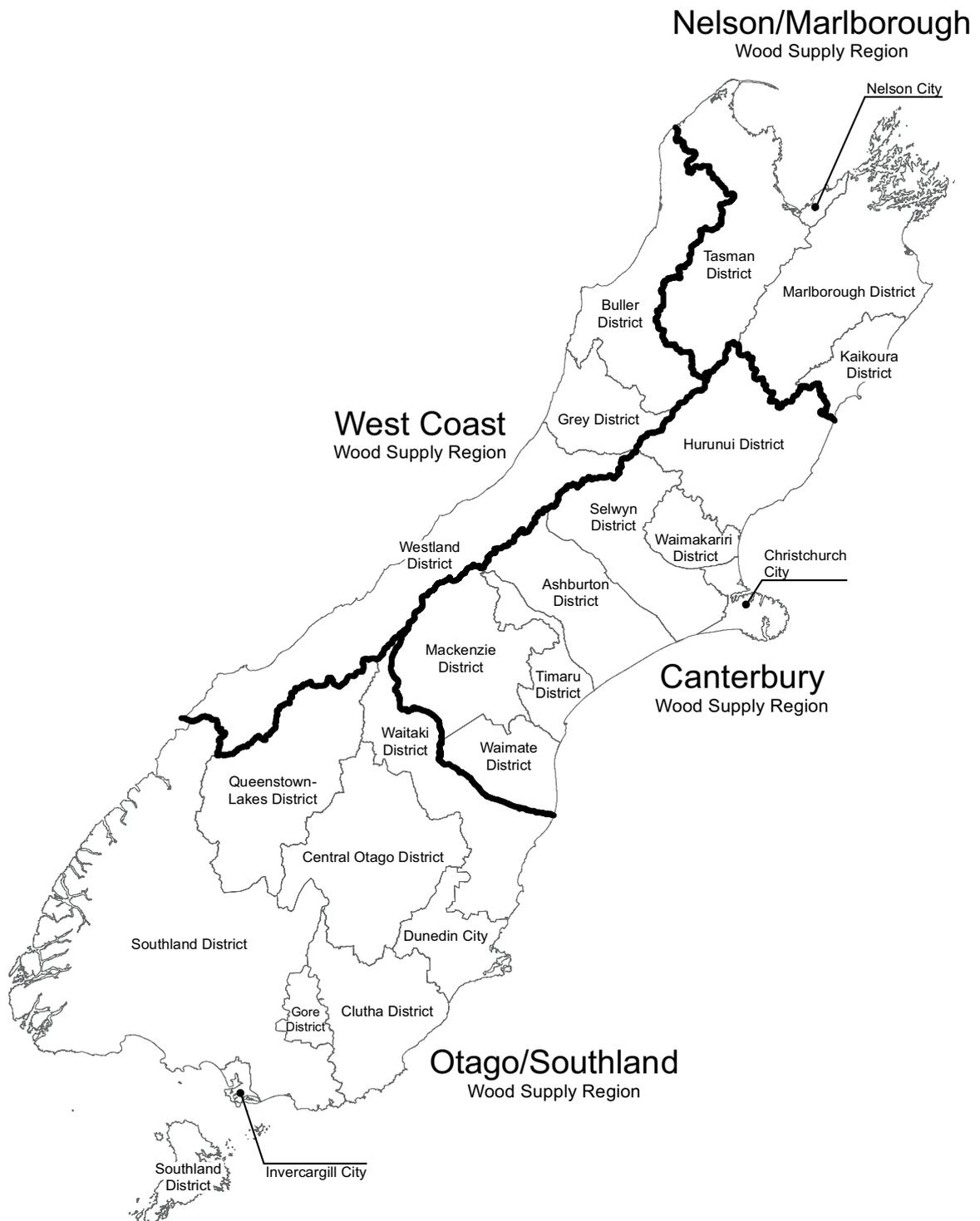
TABLE 7.1: CONTINUED

WOOD SUPPLY REGIONS	TERRITORIAL AUTHORITIES
SOUTHERN NORTH ISLAND	New Plymouth District Stratford District South Taranaki District Wanganui District Rangitikei District Manawatu District Palmerston North City Taranua District Masterton District Horowhenua District Carterton District South Wairarapa District Kapiti Coast District Upper Hutt City Porirua City Wellington City Lower Hutt City
SOUTH ISLAND	
NELSON AND MARLBOROUGH	Nelson City Tasman District Marlborough District Kaikoura District
WEST COAST	Buller District Grey District Westland District
CANTERBURY	Hurunui District Waimakariri District Christchurch City Selwyn District Ashburton District Timaru District Mackenzie District Waimate District
OTAGO AND SOUTHLAND	Waitaki District Dunedin City Queenstown-Lakes District Central Otago District Clutha District Gore District Southland District Invercargill City

FIGURE 7.1: NORTH ISLAND WOOD SUPPLY REGIONS SHOWING TERRITORIAL AUTHORITY BOUNDARIES



FIGURE 7.2: SOUTH ISLAND WOOD SUPPLY REGIONS SHOWING TERRITORIAL AUTHORITY BOUNDARIES



FOREST LOCATION

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FIGURE 8.1: DISTRIBUTION OF PLANTED FORESTS BY WOOD SUPPLY REGION – NORTH ISLAND, 2008

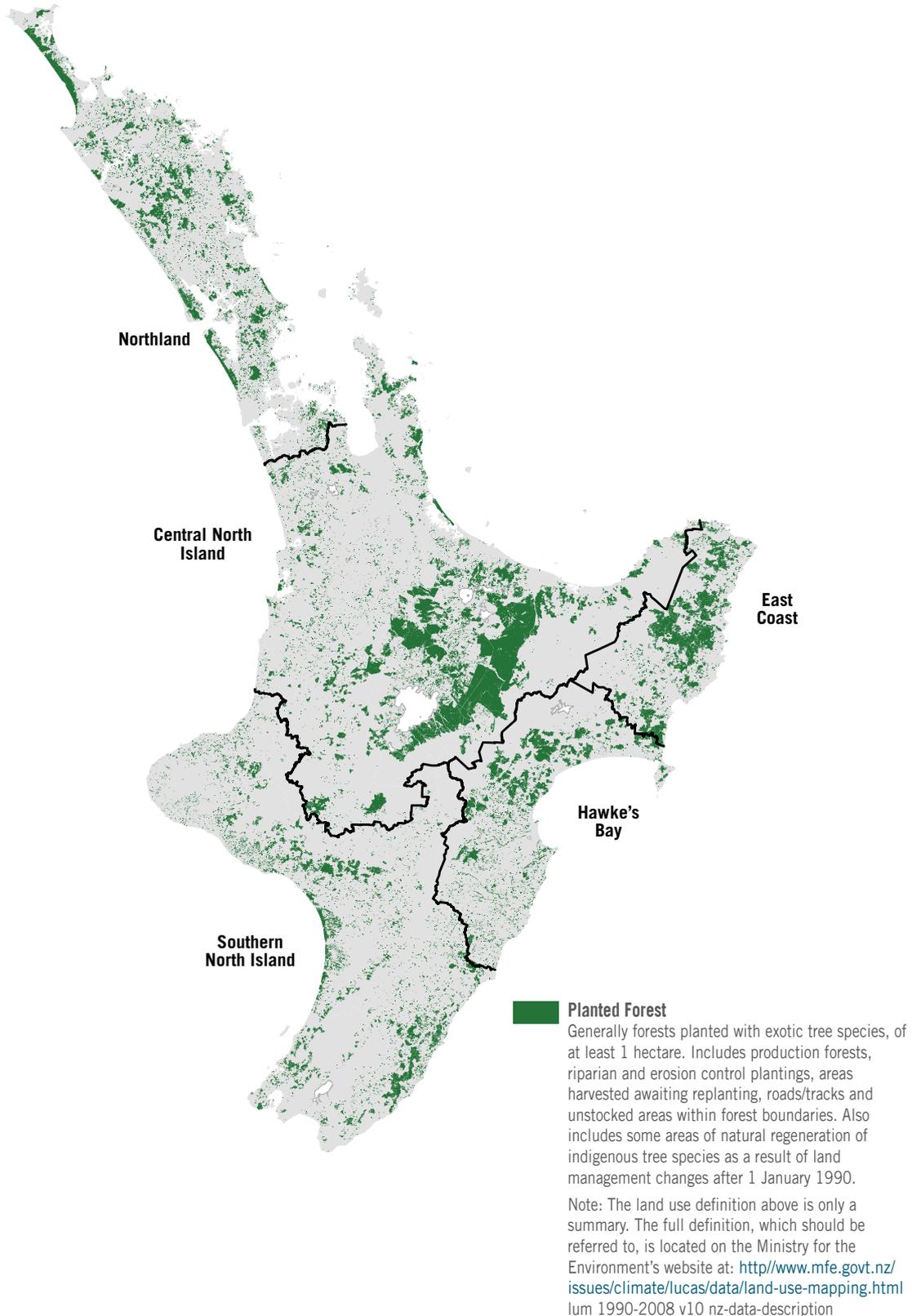
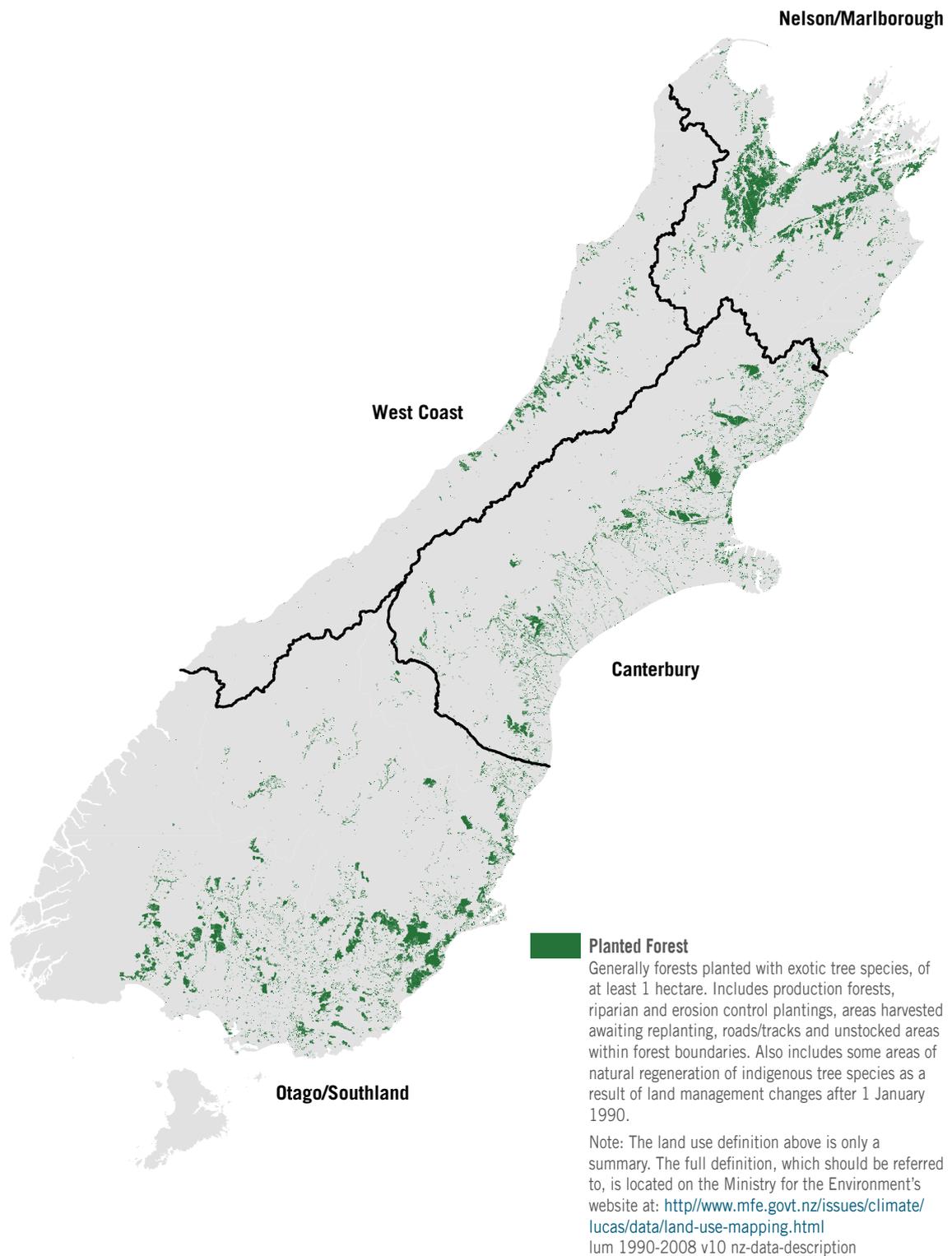


FIGURE 8.2: DISTRIBUTION OF PLANTED FORESTS BY WOOD SUPPLY REGION – SOUTH ISLAND, 2008



TABULAR SUMMARIES

AND GRAPHS

PLANTING, OWNERSHIP, NUMBER OF OWNERS AND STANDING VOLUME

TABLE 9.1: NEW LAND PLANTED IN PRODUCTION FOREST IN NEW ZEALAND¹

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)
1920	1	1969	23	1994	98
1925	14	1970	26	1995	74
1930	37	1971	29	1996	84
1935	12	1972	33	1997	64
1940	2	1973	44	1998	51
1945	0	1974	44	1999	40
1950	3	1975	45	2000	34
1951	3	1976	49	2001	30
1952	3	1977	39	2002	22
1953	3	1978	43	2003	20
1954	4	1979	44	2004	11
1955	5	1980	38	2005	6
1956	5	1981	45	2006	3
1957	5	1982	49	2007	2
1958	5	1983	51	2008	2
1959	5	1984	56	2009	4
1960	6	1985	48	2010	6
1961	7	1986	40	2011	12
1962	9	1987	30	2012	12
1963	11	1988	20	2013	4
1964	14	1989	21	2014	3
1965	13	1990	16	2015 ²	3 ^f
1966	15	1991	15	2016 ³	2 ^p
1967	17	1992	50		
1968	21	1993	62		

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, the Ministry of Agriculture and Forestry, and the Ministry for Primary Industries.

Notes

1. Prior to 1950, only five-year average annual estimates are available. The areas of new planted forests have been estimated independently from total planted forest areas shown in Table 9.2.
2. This figure is compiled from new planting reported in the 2015 NEFD survey and East Coast Forestry Project. 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 "2016 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 will be finalised in the 2017 NEFD report.

Symbols

- f Finalised.
p Provisional.

FIGURE 9.1: NEW LAND PLANTED IN PRODUCTION FOREST IN NEW ZEALAND¹



Symbol

p Provisional

Note

1. This provisional estimate is compiled from a combination of information collected in a supplementary phone survey of selected large forest owners, and known afforesters.

TABLE 9.2: PLANTED PRODUCTION FOREST AREA IN NEW ZEALAND¹

YEAR ENDED 31 MARCH	PLANTED FOREST AREA			YEAR ENDED 31 MARCH	PLANTED FOREST AREA		
	STATE ² (000 HA)	PRIVATE ³ (000 HA)	TOTAL (000 HA)		STATE ² (000 HA)	PRIVATE ³ (000 HA)	TOTAL (000 HA)
1921	16	61	77	1981	484	404	888
1926	32	66	98	1982	505	434	939
1931	124	123	247	1983	526	467	993
1936	170	147	317	1984	546	499	1 045
1941	179	150	329	1985	566	529	1 095
1946	183	149	332	1986	583	548	1 131
1951	187	151	338	1987	598	556	1 154
1952	189	151	340	1988	588	626	1 214
1953	190	151	341	1989	607	633	1 240
1954	191	151	342	1990	607	654	1 261
1955	192	152	344	1991	361	928	1 289
1956	192	154	346	1992	356	952	1 308
1957	193	155	348	1993	262	1 066	1 328
1958	194	156	350	1994	267	1 121	1 388
1959	195	157	352	1995	334	1 144	1 478
1960	195	157	352	1996	330	1 212	1 542
1961	199	159	358	1997	169	1 461	1 630
1962	213	149	362	1998	169	1 510	1 679
1963	220	152	372	1999	161	1 570	1 731
1964	228	156	384	2000	151	1 618	1 769
1965	235	160	395	2001	151	1 648	1 799
1966	241	163	404	2002	148	1 666	1 814
1967	247	167	414	2003	146	1 681	1 827
1968	257	172	429	2004	143	1 679	1 822
1969	270	177	447	2005	135	1 676	1 811
1970	283	182	465	2006	125	1 675	1 800
1971	294	189	483	2007	125	1 665	1 790
1972	306	202	508	2008	127	1 634	1 761
1973	323	215	538	2009	128	1 623	1 751
1974	343	234	577	2010	123	1 615	1 738
1975	362	254	616	2011	119	1 600	1 719
1976	385	272	657	2012	113	1 607	1 720
1977	406	299	705	2013	111	1 618	1 729
1978	425	324	749	2014	95	1 638	1 733
1979	449	350	799	2015	84	1 634	1 718
1980	467	379	846	2016	66	1 639	1 705

Sources

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 Māori leased 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.

FIGURE 9.2: PLANTED PRODUCTION FOREST AREA IN NEW ZEALAND



TABLE 9.3: FOREST OWNERSHIP, AS AT 1 APRIL 2016¹

OWNERSHIP CATEGORY ²	ESTIMATED TOTAL AREA (HA) ³	PERCENT OF ESTIMATED TOTAL
Registered public company ⁴	66 418	3.90
Privately owned ^{4,5}	1 572 414	92.24
State-owned enterprise	9 378	0.55
Local government	42 850	2.51
Central government ⁶	13 687	0.80
New Zealand total	1 704 747	100

Notes

1. The area of forest owned or managed by major forest owners can be found in the New Zealand Forest Industry booklet, Facts & Figures 2015, 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. Net stocked planted production forest area.

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. "Privately owned" includes all privately owned forests. The legal entities included in this category are private companies, partnerships, individuals and trusts, which include Māori trusts and incorporations.

6. "Central government" forests are predominantly Crown-owned forests on Māori lease hold land. These forests are managed by the Ministry for Primary Industries.

FIGURE 9.3: FOREST OWNERSHIP

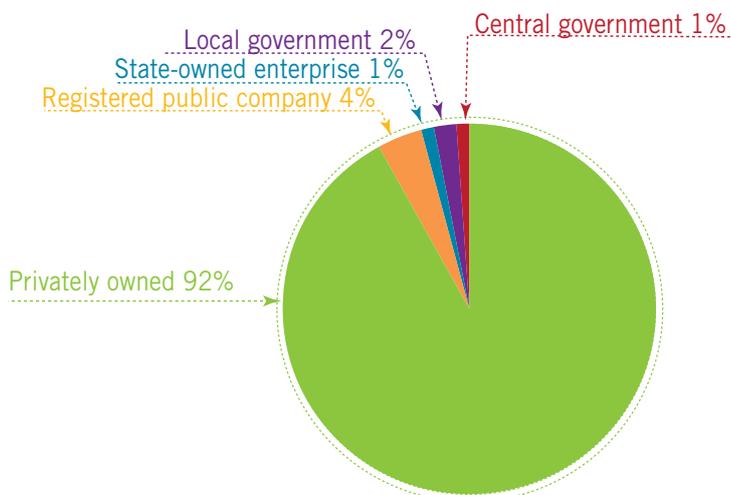


TABLE 9.4: FOREST AREA¹ BY ANNUAL AGE CLASS, AS AT 1 APRIL 2016

AGE	AREA (HA)	AGE	AREA (HA)	AGE	AREA (HA)
1	42 809	29	23 001	57	161
2	42 460	30	25 103	58	128
3	47 334	31	22 100	59	91
4	57 102	32	17 662	60	44
5	55 292	33	12 782	61	67
6	41 878	34	10 684	62	68
7	36 066	35	8 732	63	95
8	34 508	36	7 099	64	122
9	35 315	37	4 888	65	35
10	33 078	38	6 172	66	386
11	38 138	39	3 506	67	67
12	46 637	40	2 681	68	38
13	56 239	41	2 468	69	54
14	58 882	42	2 059	70	18
15	64 976	43	1 357	71	37
16	65 091	44	957	72	62
17	66 051	45	801	73	8
18	72 815	46	1 286	74	17
19	84 129	47	967	75	9
20	101 779	48	733	76	144
21	92 814	49	392	77	23
22	114 271	50	532	78	45
23	77 943	51	622	79	11
24	61 837	52	839	80+	530
25	32 909	53	221	New Zealand total	1 704 747
26	30 709	54	265		
27	30 973	55	171		
28	21 831	56	542		

Note

1. Net stocked planted production forest area.

FIGURE 9.4: FOREST AREA BY ANNUAL AGE CLASS¹

Note

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

TABLE 9.5: NUMBER OF FOREST OWNERS BY NATIONAL SIZE CLASS¹, AS AT APRIL 2016

WOOD SUPPLY REGION	NATIONAL SIZE CLASS					
	<40 HA	40–99 HA	100–499 HA	500–999 HA	1000–9999 HA	10 000+ HA
Northland	68	110	71	14	12	3
Central North Island	47	103	93	17	19	7
East Coast	29	41	45	9	15	3
Hawkes Bay	41	51	41	8	6	4
Southern North Island	94	200	155	17	13	2
Nelson and Marlborough	85	165	109	8	9	2
West Coast	10	6	4	2	1	1
Canterbury	46	77	72	4	7	1
Otago and Southland	52	136	76	8	14	4
New Zealand total²	472	889	666	87	96	27

Notes

1. This 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 large owners in the 1000–9999 hectare and 10 000+ hectare size classes.

Symbol

.. Not available.

FIGURE 9.5: NUMBER OF FOREST OWNERS BY NATIONAL SIZE CLASS

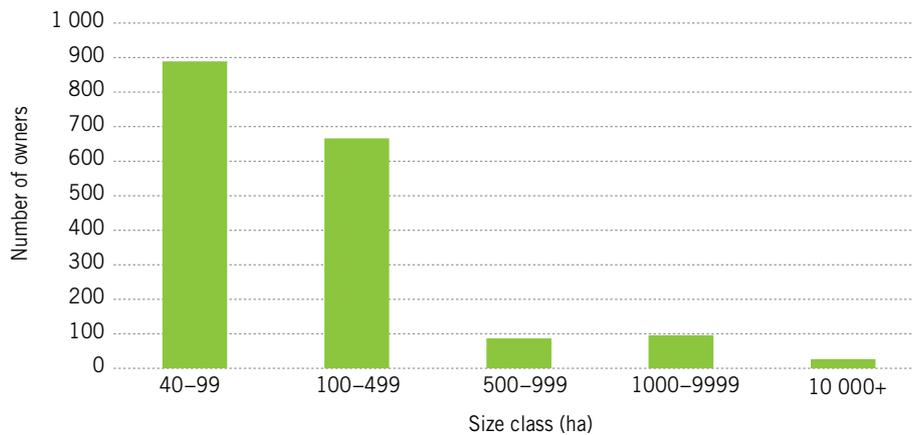


TABLE 9.6: FOREST AREA BY FOREST OWNER NATIONAL SIZE CLASS, AS AT 1 APRIL 2016

WOOD SUPPLY REGION	NATIONAL SIZE CLASS						TOTAL HA
	<40 HA	40-99 HA	100-499 HA	500-999 HA	1000-9999 HA	10 000+ HA	
Northland	35 423	7 327	13 483	9 419	37 035	83 252	185 939
Central North Island	57 456	6 620	19 485	10 901	61 115	412 204	567 781
East Coast	16 876	2 443	11 060	4 850	37 453	83 418	156 099
Hawkes Bay	21 929	3 326	7 700	3 566	12 363	84 862	133 746
Southern North Island	44 957	12 493	30 337	8 800	23 209	40 181	159 977
Nelson and Marlborough	24 769	10 519	19 304	4 848	25 401	81 957	166 798
West Coast	2 781	413	612	617	1 982	25 017	31 422
Canterbury	32 687	4 851	12 954	2 111	11 792	32 466	96 860
Otago and Southland	43 193	8 764	16 438	6 502	31 397	99 832	206 126
New Zealand total	280 070	56 756	131 372	51 613	241 746	943 189	1 704 747

FIGURE 9.6: FOREST AREA BY NATIONAL SIZE CLASS

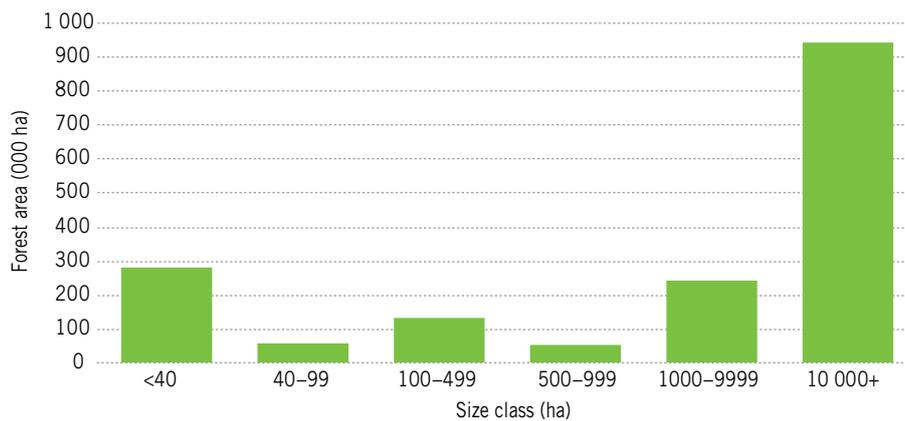


TABLE 9.7: FOREST AREA¹ COLLECTED BY POSTAL SURVEY AND ADJUSTMENTS FOR NEW PLANTING, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	COLLECTED BY POSTAL SURVEYS (HA) ²	IMPUTED NEW PLANTING 1992–2006 (HA) ³	ESTIMATED TOTAL AREA (HA)
NORTHLAND WOOD SUPPLY REGION			
Far North District	75 091	8 087	83 178
Whangarei District	25 851	3 704	29 555
Kaipara District	30 391	4 829	35 220
Auckland Council	31 741	6 245	37 986
Region total	163 074	22 865	185 939
CENTRAL NORTH ISLAND WOOD SUPPLY REGION			
Thames-Coromandel District	22 092	1 376	23 468
Hauraki District	2 486	907	3 393
Waikato District	15 055	2 294	17 349
Matamata-Piako District	925	354	1 279
Hamilton City	1		1
Waipa District	1 268	1 057	2 325
Otorohanga District	2 103	2 327	4 430
Waitomo District	16 978	6 759	23 737
Ruapehu District	41 761	8 359	50 120
South Waikato District	60 075	1 579	61 654
Taupo District	170 202	6 713	176 915
Tauranga District	71	39	110
Western Bay Of Plenty District	20 648	3 089	23 737
Rotorua District	48 770	5 272	54 042
Kawerau District	68	3	71
Whakatane District	103 682	4 283	107 965
Opotiki District	14 938	2 248	17 186
Region total	521 122	46 659	567 781
EAST COAST WOOD SUPPLY REGION			
Gisborne District	141 581	14 518	156 099
Region total	141 581	14 518	156 099
HAWKE'S BAY WOOD SUPPLY REGION			
Wairoa District	49 537	5 561	55 098
Hastings District	56 848	5 930	62 778
Napier City	78		78
Central Hawke's Bay District	11 417	4 376	15 793
Region total	117 879	15 867	133 746
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION			
New Plymouth District	3 144	760	3 904
Stratford District	3 259	1 165	4 424
South Taranaki District	7 492	2 146	9 638
Wanganui District	24 034	3 584	27 618
Rangitikei District	16 826	3 593	20 419
Manawatu District	4 566	2 033	6 599
Palmerston North City	1 958	297	2 255
Tararua District	13 976	2 926	16 902
Masterton District	29 084	3 676	32 760
Horowhenua District	5 303	1 204	6 507
Carterton District	6 907	2 686	9 593
South Wairarapa District	6 692	2 192	8 884
Kapiti Coast District	2 396	755	3 151
Upper Hutt City	4 341	646	4 987
Porirua City	1 354	54	1 408
Wellington City	536	38	574
Lower Hutt City	327	27	354
Region total	132 195	27 782	159 977
North Island total	1 075 850	127 691	1 203 541

TABLE 9.7: CONTINUED...

TERRITORIAL AUTHORITY	COLLECTED BY POSTAL SURVEYS (HA) ²	IMPUTED NEW PLANTING 1992–2006 (HA) ³	ESTIMATED TOTAL AREA (HA)
NELSON AND MARLBOROUGH WOOD SUPPLY REGION			
Nelson City	8 662	532	9 194
Tasman District	79 764	5 706	85 470
Marlborough District	61 676	9 320	70 996
Kaikoura District	930	208	1 138
Region total	151 032	15 766	166 798
WEST COAST WOOD SUPPLY REGION			
Buller District	4 104	323	4 427
Grey District	13 232	296	13 528
Westland District	12 399	1 068	13 467
Region total	29 735	1 687	31 422
CANTERBURY WOOD SUPPLY REGION			
Hurunui District	30 642	6 312	36 954
Waimakariri District	5 187	3 118	8 305
Christchurch City	6 332	3 638	9 970
Selwyn District	7 597	2 252	9 849
Ashburton District	2 351	922	3 273
Timaru District	9 375	2 521	11 896
Mackenzie District	3 703	1 158	4 861
Waimate District	7 758	3 996	11 754
Region total	72 943	23 917	96 860
OTAGO AND SOUTHLAND WOOD SUPPLY REGION			
Waitaki District	15 146	3 884	19 030
Dunedin City	13 607	1 374	14 981
Queenstown-Lakes District	608	130	738
Central Otago District	5 673	1 771	7 444
Clutha District	70 573	11 741	82 314
Gore District	2 509	1 810	4 319
Southland District	64 251	12 870	77 121
Invercargill City	80	99	179
Region total	172 447	33 679	206 126
South Island total	426 156	75 049	501 205
New Zealand total	1 502 007	202 740	1 704 747

Notes

1. Net stocked planted production forest area.
2. Comprises the combined results from the 2016 NEFD survey and a small forest grower survey conducted by AgriQuality.
3. Adjustments made to the area of new forest planted between 1992 and 2006. New planting imputation is discussed on page 6.
4. Individual entries may not add to totals due to rounding.

FIGURE 9.7: TOTAL FOREST AREA BY WOOD SUPPLY REGION

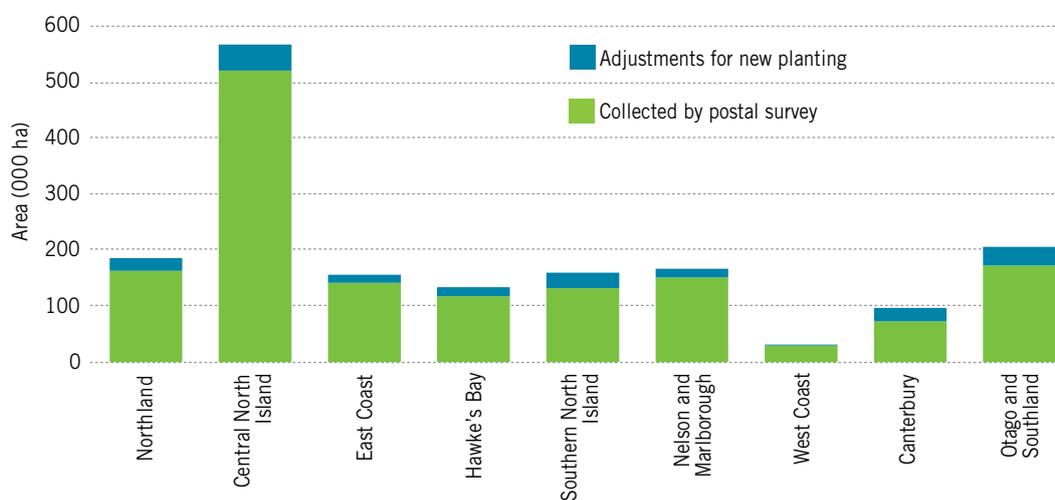


TABLE 9.8: AREA¹, STANDING VOLUME AND AREA-WEIGHTED AVERAGE AGE BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	AREA (HA)	STANDING VOLUME (000 M ³)	AREA-WEIGHTED AVERAGE AGE (YEARS)
NORTHLAND WOOD SUPPLY REGION			
Far North District	83 178	25 731	17.36
Whangarei District	29 555	8 718	16.21
Kaipara District	35 220	11 820	17.57
Auckland Council	37 986	11 578	17.42
Region total	185 939	57 848	17.23
CENTRAL NORTH ISLAND WOOD SUPPLY REGION			
Thames-Coromandel District	23 468	6 765	14.69
Hauraki District	3 393	1 474	18.84
Waikato District	17 349	7 059	18.11
Matamata-Piako District	1 279	487	17.66
Hamilton City	1	1	34.00
Waipa District	2 325	992	18.58
Otorohanga District	4 430	1 868	18.84
Waitomo District	23 737	8 663	17.53
Ruapehu District	50 120	18 901	17.14
South Waikato District	61 654	20 487	15.38
Taupo District	176 915	51 695	15.04
Tauranga District	110	56	21.25
Western Bay Of Plenty District	23 737	8 940	17.22
Rotorua District	54 042	15 877	15.33
Kawerau District	71	44	22.00
Whakatane District	107 965	32 339	15.26
Opotiki District	17 186	6 290	17.33
Region total	567 781	181 938	15.75
EAST COAST WOOD SUPPLY REGION			
Gisborne District	156 099	54 348	17.98
Region total	156 099	54 348	17.98
HAWKE'S BAY WOOD SUPPLY REGION			
Wairoa District	55 098	16 728	16.50
Hastings District	62 778	19 065	16.07
Napier City	78	35	22.27
Central Hawke's Bay District	15 793	6 457	19.93
Region total	133 746	42 284	16.71
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION			
New Plymouth District	3 904	1 282	19.32
Stratford District	4 424	1 490	18.73
South Taranaki District	9 638	3 819	21.09
Wanganui District	27 618	8 594	17.92
Rangitikei District	20 419	6 860	19.59
Manawatu District	6 599	2 528	20.93
Palmerston North City	2 255	649	16.52
Tararua District	16 902	5 468	18.28
Masterton District	32 760	11 820	19.97
Horowhenua District	6 507	2 206	19.75
Carterton District	9 593	2 753	17.11
South Wairarapa District	8 884	2 909	18.70
Kapiti Coast District	3 151	1 266	21.22
Upper Hutt City	4 987	1 601	18.27
Porirua City	1 408	690	24.87
Wellington City	574	226	20.52
Lower Hutt City	354	222	30.35
Region total	159 977	54 384	19.22
North Island total	1 203 541	390 801	16.83

TABLE 9.8: CONTINUED...

TERRITORIAL AUTHORITY	AREA (HA)	STANDING VOLUME (000 M ³)	AREA-WEIGHTED AVERAGE AGE (YEARS)
NELSON AND MARLBOROUGH WOOD SUPPLY REGION			
Nelson City	9 194	2 095	15.23
Tasman District	85 470	20 218	16.35
Marlborough District	70 996	19 440	17.38
Kaikoura District	1 138	400	21.82
Region total	166 798	42 154	16.77
WEST COAST WOOD SUPPLY REGION			
Buller District	4 427	904	18.28
Grey District	13 528	3 197	18.60
Westland District	13 467	2 245	17.33
Region total	31 422	6 346	18.01
CANTERBURY WOOD SUPPLY REGION			
Hurunui District	36 954	7 821	18.20
Waimakariri District	8 305	1 929	19.20
Christchurch City	9 970	2 185	20.76
Selwyn District	9 849	2 547	21.20
Ashburton District	3 273	662	19.23
Timaru District	11 896	2 426	19.93
Mackenzie District	4 861	1 180	23.45
Waimate District	11 754	2 350	19.42
Region total	96 860	21 099	19.51
OTAGO AND SOUTHLAND WOOD SUPPLY REGION			
Waitaki District	19 030	4 276	18.50
Dunedin City	14 981	3 393	16.46
Queenstown-Lakes District	738	287	28.79
Central Otago District	7 444	1 518	22.16
Clutha District	82 314	16 536	17.20
Gore District	4 319	1 007	19.88
Southland District	77 121	13 974	17.02
Invercargill City	179	69	22.63
Region total	206 126	41 060	17.48
South Island total	501 205	110 659	17.67
New Zealand total	1 704 747	501 460	17.08

Note

1. Net stocked planted production forest area.
2. Individual entries may not add to totals due to rounding.

FIGURE 9.8: STANDING VOLUME BY WOOD SUPPLY REGION

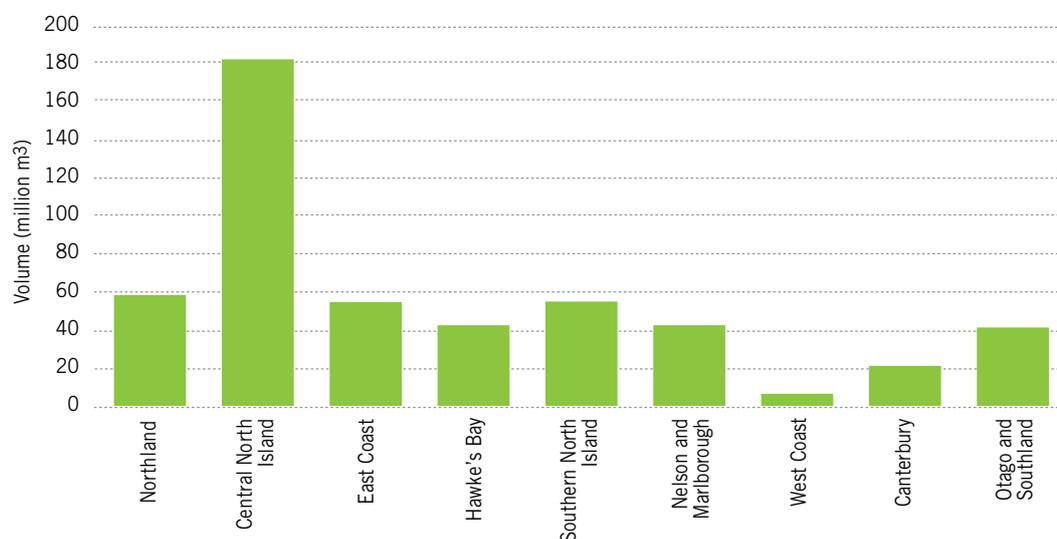


TABLE 9.9: FOREST AREA¹ BY AGE CLASS AND TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	15 210	10 129	10 566	11 637	15 337	11 174	7 700	1 050	296	36	44	83 178
Whangarei District	6 399	3 011	3 503	5 942	6 036	2 370	1 567	397	293	14	22	29 555
Kaipara District	6 560	2 237	3 341	8 659	6 870	6 379	785	170	182	13	24	35 220
Auckland Council	2 773	4 343	8 455	9 700	9 196	1 080	878	1 226	248	61	26	37 986
Region total	30 942	19 720	25 865	35 938	37 439	21 003	10 930	2 843	1 019	124	116	185 939
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	4 669	5 057	4 228	3 153	3 388	573	1 596	549	165	18	72	23 468
Hauraki District	304	146	375	920	1 297	280	27	29	9	0	6	3 393
Waikato District	1 398	1 221	2 481	5 137	5 572	1 005	300	78	58	13	86	17 349
Matamata-Piako District	110	345	66	160	422	55	38	76	4	0	3	1 279
Hamilton City	0	0	0	0	0	0	1	0	0	0	0	1
Waipa District	172	71	230	974	695	88	51	38	3	0	3	2 325
Otorohanga District	129	0	1 268	996	1 682	193	113	38	9	0	2	4 430
Waitomo District	283	4 128	3 888	6 854	7 122	771	302	90	272	18	9	23 737
Ruapehu District	10 349	2 035	4 138	17 464	7 953	5 403	2 192	465	62	30	29	50 120
South Waikato District	8 676	7 553	13 684	14 681	12 790	3 815	252	24	48	4	127	61 654
Taupo District	38 192	23 500	33 665	32 924	18 721	19 686	7 762	1 537	554	314	60	176 915
Tauranga District	0	0	12	36	39	17	6	0	0	0	0	110
Western Bay Of Plenty District	2 514	3 258	4 099	4 426	5 856	2 607	561	304	21	76	15	23 737
Rotorua District	9 134	8 190	11 137	11 129	8 414	3 996	767	600	450	37	188	54 042
Kawerau District	0	0	0	34	0	37	0	0	0	0	0	71
Whakatane District	17 708	17 663	15 801	25 905	20 569	7 057	2 212	769	180	74	27	107 965
Opotiki District	5 559	1 307	1 376	1 236	948	3 208	3 330	212	10	0	0	17 186
Region total	99 197	74 474	96 448	126 029	95 468	48 791	19 510	4 809	1 845	584	627	567 781
EAST COAST WOOD SUPPLY REGION												
Gisborne District	25 080	10 331	18 763	34 708	41 292	13 361	7 990	2 734	1 368	440	32	156 099
Region total	25 080	10 331	18 763	34 708	41 292	13 361	7 990	2 734	1 368	440	32	156 099
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	7 035	6 089	10 475	11 458	16 276	1 406	1 823	300	143	69	23	55 098
Hastings District	8 017	8 119	12 490	12 698	17 180	2 765	904	345	181	42	36	62 778
Napier City	0	0	0	45	21	0	12	0	0	0	0	78
Central Hawke's Bay District	799	735	1 462	5 988	4 722	852	637	348	150	47	53	15 793
Region total	15 851	14 943	24 427	30 189	38 199	5 023	3 376	993	474	158	112	133 746
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	164	293	630	1 107	1 129	319	150	76	33	1	2	3 904
Stratford District	628	23	339	493	2 745	105	54	28	6	0	3	4 424
South Taranaki District	348	77	1 019	2 650	4 021	882	314	267	48	3	9	9 638
Wanganui District	2 620	2 545	3 595	6 440	9 328	2 306	480	150	122	15	17	27 618
Rangitikei District	1 165	601	2 483	8 355	5 388	1 062	498	339	344	165	20	20 419
Manawatu District	539	97	844	1 034	2 925	402	400	268	71	4	15	6 599
Palmerston North City	364	547	209	179	653	52	31	162	58	0	0	2 255
Taranua District	2 678	786	1 560	4 926	4 695	727	945	338	217	21	9	16 902
Masterton District	2 610	2 452	3 840	7 092	10 815	2 261	2 654	442	427	146	22	32 760
Horowhenua District	330	712	1 119	665	2 628	461	335	124	72	33	29	6 507
Carterton District	1 182	979	1 164	3 067	2 144	614	157	136	117	32	1	9 593
South Wairarapa District	1 270	124	1 355	2 352	2 467	712	238	252	107	6	1	8 884
Kapiti Coast District	109	93	362	662	1 220	407	247	50	1	0	0	3 151
Upper Hutt City	778	584	723	903	766	539	448	132	55	29	31	4 987
Porirua City	10	3	155	34	758	230	138	11	69	0	0	1 408
Wellington City	0	68	36	76	308	70	14	2	0	0	0	574
Lower Hutt City	0	0	10	52	50	15	150	63	14	0	0	354
Region total	14 794	9 985	19 444	40 085	52 039	11 164	7 252	2 840	1 761	455	159	159 977
North Island total	185 863	129 452	184 947	266 950	264 437	99 342	49 057	14 220	6 466	1 761	1 046	1 203 541

TABLE 9.9: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	1 301	2 210	1 556	1 344	1 796	447	339	91	71	17	22	9 194
Tasman District	11 009	14 571	15 056	14 863	19 449	5 123	2 812	1 791	570	149	78	85 470
Marlborough District	12 126	6 128	8 203	13 386	20 451	5 833	3 177	1 084	481	109	17	70 996
Kaikoura District	59	0	96	434	391	16	23	64	36	19	0	1 138
Region total	24 495	22 909	24 912	30 027	42 087	11 419	6 350	3 030	1 158	294	117	166 798
WEST COAST WOOD SUPPLY REGION												
Buller District	985	483	307	889	677	277	285	456	44	0	24	4 427
Grey District	1 435	2 331	2 730	2 262	1 511	425	1 664	442	585	140	3	13 528
Westland District	922	2 533	2 501	3 212	2 249	640	821	350	196	42	1	13 467
Region total	3 342	5 347	5 538	6 363	4 437	1 342	2 770	1 248	825	182	28	31 422
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	2 909	3 137	7 675	9 919	7 351	2 810	1 705	881	327	136	104	36 954
Waimakariri District	756	591	950	1 753	3 413	383	180	79	127	71	2	8 305
Christchurch City	589	279	915	2 198	4 559	609	531	172	75	5	39	9 970
Selwyn District	927	524	699	1 922	2 910	1 748	628	203	209	50	28	9 849
Ashburton District	438	281	381	825	649	228	242	47	110	46	26	3 273
Timaru District	684	553	2 987	2 482	2 297	1 647	444	439	294	28	41	11 896
Mackenzie District	152	313	566	884	1 734	256	299	190	247	127	92	4 861
Waimate District	982	649	954	5 176	2 117	751	877	129	48	44	27	11 754
Region total	7 438	6 326	15 127	25 159	25 030	8 432	4 906	2 140	1 437	507	359	96 860
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	1 652	838	3 028	7 534	3 323	1 318	841	294	137	46	20	19 030
Dunedin City	4 500	1 338	769	1 716	3 674	1 151	1 353	312	90	18	60	14 981
Queenstown-Lakes District	0	3	27	71	180	189	123	103	7	28	7	738
Central Otago District	380	202	874	2 611	1 628	256	429	392	492	96	84	7 444
Clutha District	8 952	8 317	14 338	22 686	18 275	4 646	3 446	1 118	344	95	97	82 314
Gore District	0	108	97	2 535	1 298	118	57	44	47	15	0	4 319
Southland District	8 375	6 003	15 204	24 188	15 303	3 383	2 620	1 435	550	42	18	77 121
Invercargill City	0	3	12	25	102	20	8	9	0	0	0	179
Region total	23 859	16 812	34 348	61 366	43 782	11 082	8 877	3 707	1 667	340	286	206 126
South Island total	59 134	51 393	79 925	122 915	115 336	32 275	22 903	10 125	5 087	1 323	790	501 205
New Zealand total	244 997	180 845	264 872	389 865	379 773	131 617	71 960	24 345	11 553	3 083	1 836	1 704 747

Note

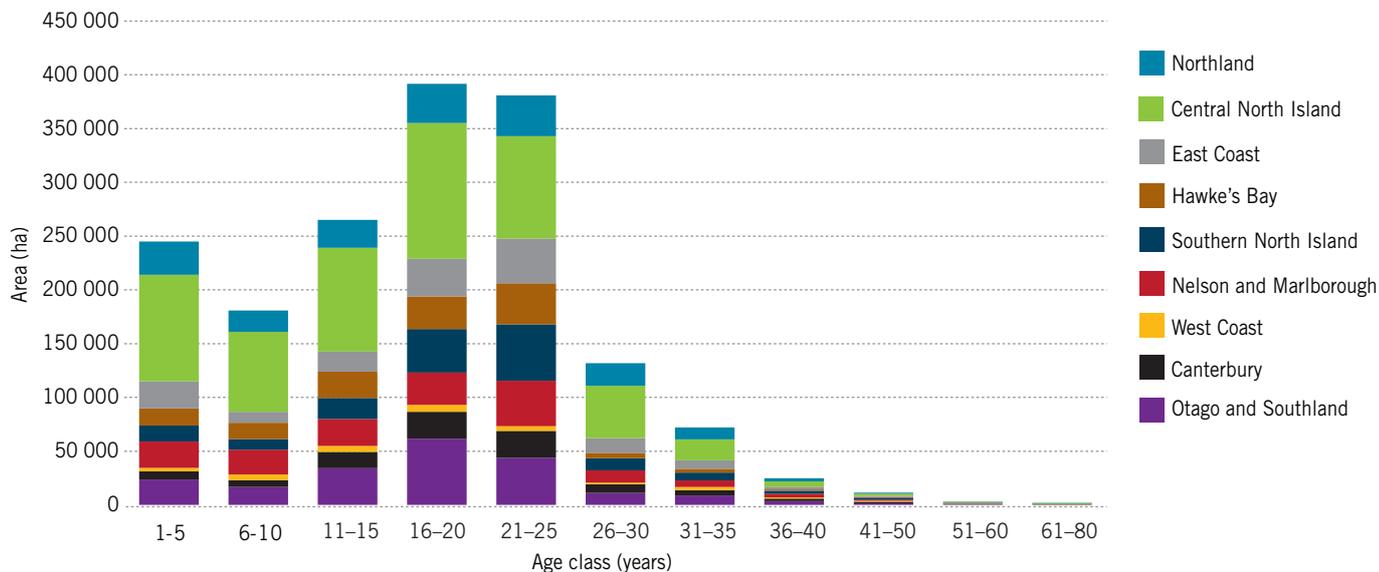
1. Net stocked planted production forest area.

2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.9: FOREST AREA BY AGE CLASS AND WOOD SUPPLY REGION





SPECIES

This section presents detailed information for each NEFD species group, showing the forest areas for each territorial authority by five-yearly age classes. Figure 9.10 provides an overview of this by illustrating the species composition by age class.

The following six tables provide information about the net stocked forest area planted in:

- Radiata pine;
- Douglas-fir;
- Cypress species;
- Other softwoods;
- Eucalypt species;
- Other hardwoods.

FIGURE 9.10: FOREST AREA BY AGE CLASS AND SPECIES, AS AT 1 APRIL 2016

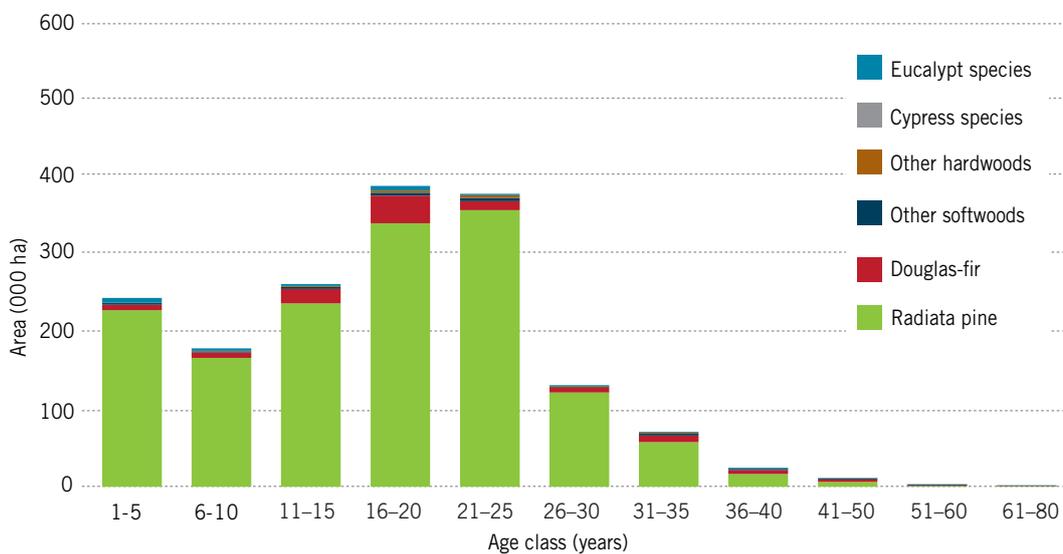


TABLE 9.10: AREA¹ PLANTED IN RADIATA PINE BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	15 189	10 121	10 144	11 250	15 099	11 093	7 455	941	260	17	0	81 569
Whangarei District	6 393	3 011	3 470	5 678	5 799	2 344	1 544	323	287	2	3	28 855
Kaipara District	6 558	2 236	3 254	8 377	6 653	6 306	763	160	152	12	6	34 477
Auckland Council	2 770	4 286	8 306	9 404	8 854	992	753	1 139	191	40	13	36 748
Region total	30 910	19 654	25 174	34 709	36 405	20 735	10 515	2 563	890	71	22	181 649
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	4 668	5 057	4 219	3 143	3 323	562	1 498	496	148	16	25	23 155
Hauraki District	300	55	357	886	1 290	279	24	29	1	0	0	3 221
Waikato District	1 398	1 211	2 373	5 096	5 510	968	281	77	42	8	54	17 018
Matamata-Piako District	109	345	56	140	403	53	36	76	4	0	0	1 222
Hamilton City	0	0	0	0	0	0	1	0	0	0	0	1
Waipa District	172	71	177	794	659	84	48	28	3	0	2	2 038
Otorohanga District	129	0	1 197	944	1 621	145	89	38	5	0	0	4 168
Waitomo District	197	2 691	3 742	6 649	6 853	765	286	89	3	0	0	21 275
Ruapehu District	9 879	2 027	3 955	17 068	7 814	5 398	2 176	367	19	1	0	48 704
South Waikato District	6 496	7 113	13 063	14 376	12 740	3 611	248	23	36	0	77	57 783
Taupo District	37 091	22 491	32 043	31 740	17 368	18 860	6 767	609	37	52	23	167 080
Tauranga District	0	0	10	28	38	16	5	0	0	0	0	97
Western Bay Of Plenty District	2 498	3 204	3 939	4 130	5 720	2 566	462	286	3	0	1	22 809
Rotorua District	9 022	8 058	10 869	10 225	8 017	3 505	322	238	42	1	18	50 317
Kawerau District	0	0	0	0	0	37	0	0	0	0	0	37
Whakatane District	17 693	17 617	15 300	24 298	19 645	5 577	870	392	26	22	9	101 449
Opotiki District	5 533	1 303	1 365	1 226	940	3 196	3 329	210	10	0	0	17 112
Region total	95 184	71 243	92 665	120 743	91 941	45 622	16 442	2 958	379	100	209	537 486
EAST COAST WOOD SUPPLY REGION												
Gisborne District	23 980	9 600	18 339	34 039	40 810	13 201	7 777	2 497	863	23	8	151 138
Region total	23 980	9 600	18 339	34 039	40 810	13 201	7 777	2 497	863	23	8	151 138
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	6 588	6 017	10 047	11 406	16 236	1 385	1 801	236	82	0	3	53 801
Hastings District	7 880	7 330	12 393	12 563	16 976	2 725	797	315	126	24	18	61 147
Napier City	0	0	0	45	15	0	8	0	0	0	0	68
Central Hawke's Bay District	792	607	1 423	5 914	4 661	831	538	343	129	17	6	15 261
Region total	15 260	13 954	23 863	29 928	37 887	4 941	3 144	894	337	41	27	130 277
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	103	163	486	756	1 090	307	140	72	30	1	0	3 148
Stratford District	157	16	321	480	2 686	104	47	28	4	0	1	3 844
South Taranaki District	347	74	982	2 598	3 970	870	311	265	48	3	6	9 472
Wanganui District	2 597	2 533	3 373	6 350	9 229	2 293	446	125	68	0	10	27 024
Rangitikei District	604	496	2 191	8 084	5 274	998	469	309	269	84	2	18 780
Manawatu District	538	96	792	970	2 867	373	350	246	68	2	5	6 307
Palmerston North City	292	547	201	177	601	51	31	162	58	0	0	2 120
Tararua District	2 404	786	1 530	4 876	4 678	717	676	323	206	18	7	16 221
Masterton District	2 541	2 421	3 760	6 993	10 735	2 237	2 597	418	335	93	11	32 141
Horowhenua District	326	699	1 113	642	2 549	446	315	118	72	30	15	6 324
Carterton District	1 182	979	1 158	3 030	2 126	603	156	116	100	2	1	9 453
South Wairarapa District	1 270	124	1 344	2 339	2 433	640	232	117	107	1	1	8 608
Kapiti Coast District	109	93	352	639	1 192	405	247	49	1	0	0	3 087
Upper Hutt City	778	582	719	891	755	522	369	130	50	9	31	4 835
Porirua City	10	3	155	34	752	229	137	11	69	0	0	1 400
Wellington City	0	68	36	76	308	70	14	2	0	0	0	574
Lower Hutt City	0	0	10	50	50	13	150	63	14	0	0	350
Region total	13 256	9 681	18 524	38 981	51 296	10 878	6 686	2 554	1 499	243	90	153 687
North Island total	178 591	124 131	178 564	258 401	258 339	95 378	44 564	11 467	3 967	478	356	1 154 236

TABLE 9.10: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	1 300	2 202	1 548	1 301	1 760	439	82	16	13	1	0	8 662
Tasman District	11 003	14 397	14 658	13 683	17 623	4 058	1 351	551	283	50	18	77 674
Marlborough District	11 992	6 065	7 915	12 731	20 123	5 645	2 332	830	389	100	2	68 124
Kaikoura District	47	0	88	409	389	15	22	60	0	2	0	1 032
Region total	24 342	22 664	24 210	28 124	39 895	10 157	3 787	1 457	685	153	20	155 492
WEST COAST WOOD SUPPLY REGION												
Buller District	845	289	175	713	631	275	58	72	11	0	0	3 069
Grey District	1 347	2 008	2 451	2 080	1 481	372	1 407	292	197	17	0	11 652
Westland District	922	1 472	1 074	1 590	1 110	69	150	276	190	1	0	6 854
Region total	3 114	3 769	3 700	4 383	3 222	716	1 615	640	398	18	0	21 575
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	2 350	2 171	5 793	8 672	6 730	2 592	721	427	85	102	6	29 648
Waimakariri District	658	570	913	1 676	3 163	341	166	43	30	65	2	7 626
Christchurch City	589	278	622	1 768	2 937	516	471	149	68	2	23	7 422
Selwyn District	916	524	640	1 649	2 285	1 385	503	185	100	17	1	8 205
Ashburton District	428	267	323	559	518	88	194	32	72	8	20	2 509
Timaru District	383	259	480	1 246	2 091	1 388	303	60	37	3	0	6 250
Mackenzie District	49	164	170	349	1 157	111	108	59	78	15	0	2 260
Waimate District	884	616	622	2 814	1 361	677	561	54	30	23	14	7 656
Region total	6 257	4 848	9 563	18 733	20 242	7 097	3 027	1 009	500	235	66	71 576
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	1 513	639	2 794	3 881	3 088	1 245	639	197	132	33	11	14 171
Dunedin City	4 403	1 281	668	1 472	3 404	945	693	78	23	13	1	12 981
Queenstown-Lakes District	0	0	10	18	42	23	36	80	1	23	7	240
Central Otago District	0	5	206	235	969	74	233	95	31	5	49	1 902
Clutha District	5 617	5 731	10 439	13 748	15 947	3 574	1 643	491	186	18	4	57 398
Gore District	0	6	64	781	1 097	73	57	41	45	1	0	2 165
Southland District	4 731	3 694	6 809	9 679	10 982	2 425	1 401	667	419	15	2	40 822
Invercargill City	0	3	12	25	99	20	8	9	0	0	0	176
Region total	16 263	11 359	21 001	29 839	35 628	8 379	4 709	1 658	837	108	74	129 855
South Island total	49 976	42 640	58 474	81 079	98 986	26 349	13 138	4 764	2 420	514	160	378 498
New Zealand total	228 567	166 770	237 038	339 479	357 325	121 727	57 702	16 231	6 387	992	516	1 532 734

Note

1. Net stocked planted production forest area.

2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.11: AREA PLANTED IN RADIATA PINE BY WOOD SUPPLY REGION

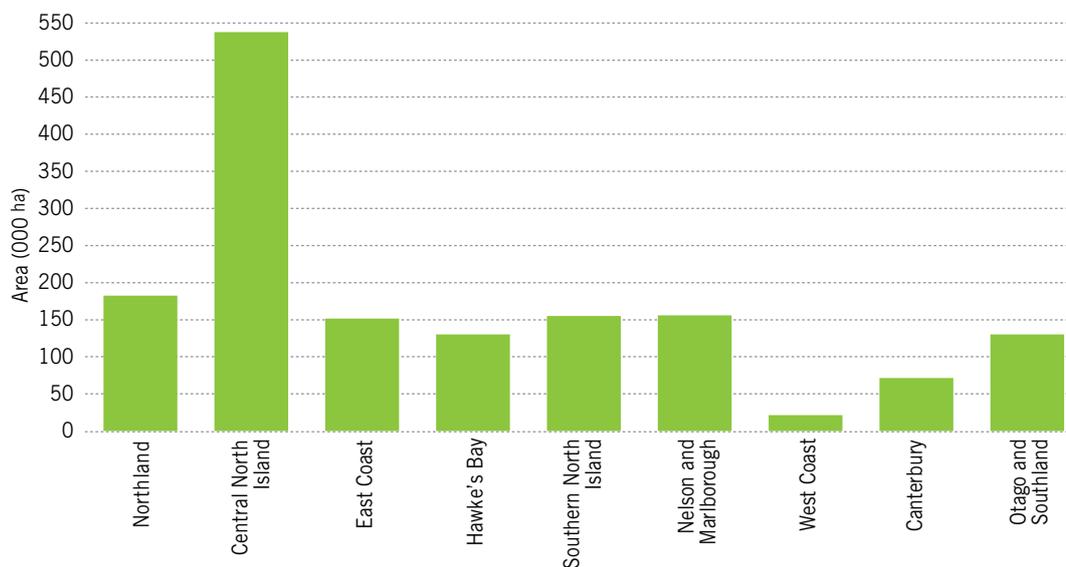


TABLE 9.11: AREA¹ PLANTED IN DOUGLAS-FIR BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	1	3	0	0	0	0	0	0	0	4
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	0	0	0	2	1	0	0	0	0	0	0	3
Otorohanga District	0	0	54	37	22	1	0	0	1	0	0	115
Waitomo District	0	1 436	128	153	190	0	2	0	263	4	0	2 176
Ruapehu District	361	3	148	168	21	0	4	20	31	29	1	786
South Waikato District	0	223	216	11	4	0	0	0	5	2	7	468
Taupo District	173	171	1 307	751	994	780	875	871	410	36	11	6 379
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay Of Plenty District	0	0	4	7	5	0	1	2	18	2	0	39
Rotorua District	0	0	36	485	241	426	217	329	359	22	110	2 225
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	17	207	1 344	796	1 414	1 283	363	149	30	9	5 612
Opotiki District	19	0	0	0	0	0	0	0	0	0	0	19
Region total	553	1 858	2 101	2 961	2 285	2 621	2 383	1 585	1 236	125	138	17 846
EAST COAST WOOD SUPPLY REGION												
Gisborne District	313	337	229	520	268	0	1	3	374	136	0	2 181
Region total	313	337	229	520	268	0	1	3	374	136	0	2 181
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	45	0	40	0	1	0	0	2	46	31	4	169
Hastings District	2	0	C	C	117	0	27	4	26	14	1	226
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawke's Bay District	0	0	C	C	23	1	0	1	0	11	2	50
Region total	47	0	60	27	141	1	27	7	72	56	7	445
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	1	0	0	0	0	1
Wanganui District	0	8	4	11	10	6	12	2	25	9	0	87
Rangitikei District	150	1	10	50	50	0	1	8	4	8	1	283
Manawatu District	0	0	2	5	0	6	4	2	1	0	0	20
Palmerston North City	23	0	0	0	0	0	0	0	0	0	0	23
Taranua District	0	0	6	17	0	0	1	0	10	0	0	34
Masterton District	2	1	6	10	4	0	0	1	82	14	7	127
Horowhenua District	0	0	0	0	0	1	0	0	0	0	0	1
Carterton District	0	0	2	22	1	0	0	0	0	0	0	25
South Wairarapa District	0	0	0	0	0	0	1	0	0	0	0	1
Kapiti Coast District	0	0	1	2	0	0	0	0	0	0	0	3
Upper Hutt City	0	0	3	8	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
Region total	174	10	35	126	66	16	20	13	126	33	8	628
North Island total	1 088	2 205	2 425	3 634	2 768	2 638	2 431	1 608	1 810	350	153	21 110

TABLE 9.11: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	0	8	C	C	25	2	203	62	45	5	2	390
Tasman District	0	117	245	1 000	1 523	970	1 180	859	170	53	27	6 144
Marlborough District	27	32	C	C	115	97	711	163	59	6	3	1 735
Kaikoura District	12	0	0	18	2	0	1	0	36	17	0	86
Region total	39	157	327	1 496	1 665	1 069	2 095	1 084	310	81	32	8 355
WEST COAST WOOD SUPPLY REGION												
Buller District	140	194	131	163	8	2	5	39	1	0	1	684
Grey District	88	198	138	156	0	0	34	24	228	21	2	889
Westland District	0	0	0	12	2	0	13	0	2	9	0	38
Region total	228	392	269	331	10	2	52	63	231	30	3	1 611
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	549	364	1 138	1 175	541	203	466	304	32	2	8	4 782
Waimakariri District	90	0	37	39	21	6	7	29	85	5	0	319
Christchurch City	0	0	3	96	35	29	14	9	3	0	0	189
Selwyn District	12	0	44	166	445	302	112	15	101	16	25	1 238
Ashburton District	10	13	38	172	71	72	27	15	38	8	2	466
Timaru District	301	248	2 478	968	48	83	13	376	212	10	29	4 766
Mackenzie District	C	124	382	470	296	74	48	C	10	10	59	1 640
Waimate District	C	18	259	2 171	672	32	100	C	14	9	12	3 341
Region total	1 100	767	4 379	5 257	2 129	801	787	831	495	60	135	16 740
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	21	103	198	3 507	84	10	139	C	4	C	0	4 138
Dunedin City	25	41	82	224	93	83	616	194	66	3	13	1 439
Queenstown-Lakes District	0	0	12	52	116	153	87	23	6	2	0	451
Central Otago District	117	145	610	2 134	115	76	68	C	74	C	6	3 397
Clutha District	3 103	2 328	3 522	7 672	1 964	856	1 297	519	123	50	6	21 440
Gore District	0	1	27	1 160	57	4	0	3	2	14	0	1 268
Southland District	1 380	1 086	6 912	10 479	2 696	215	948	397	87	25	0	24 225
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	4 646	3 704	11 363	25 228	5 125	1 397	3 155	1 248	362	106	25	56 358
South Island total	6 012	5 020	16 338	32 312	8 929	3 269	6 089	3 226	1 398	277	195	83 063
New Zealand total	7 100	7 225	18 763	35 946	11 697	5 907	8 520	4 834	3 208	626	348	104 173

Note

1. Net stocked planted production forest area.

2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.12: AREA PLANTED IN DOUGLAS-FIR BY WOOD SUPPLY REGION

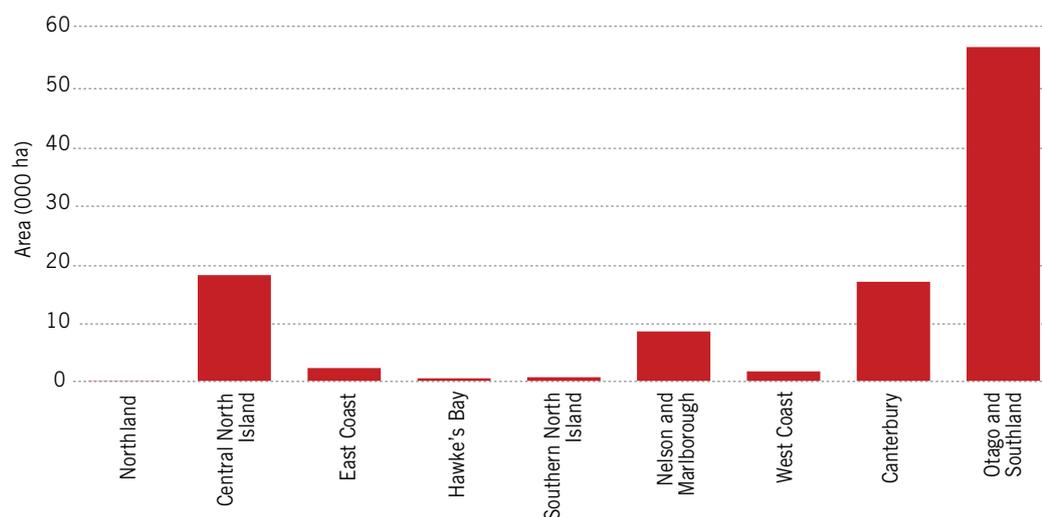


TABLE 9.12: AREA¹ PLANTED IN CYPRESS SPECIES BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	8	3	24	32	61	0	4	10	0	0	0	142
Whangarei District	1	0	0	9	15	0	0	2	0	0	0	27
Kaipara District	2	0	21	0	6	0	0	0	0	0	0	29
Auckland Council	3	16	48	32	113	16	4	0	5	0	0	237
Region total	14	19	93	73	195	16	8	12	5	0	0	435
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	0	0	0	2	4	7	27	0	0	0	0	40
Hauraki District	0	20	0	0	0	1	2	0	0	0	0	23
Waikato District	0	0	0	1	0	1	6	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
Waipa District	0	0	0	0	3	0	0	0	0	0	0	3
Otorohanga District	0	0	0	0	0	4	0	0	0	0	0	4
Waitomo District	0	0	0	0	1	0	2	0	0	0	0	3
Ruapehu District	107	0	4	0	0	0	1	0	0	0	12	124
South Waikato District	7	2	0	0	10	9	0	0	0	0	0	28
Taupo District	6	225	62	64	13	0	3	0	0	0	0	373
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay Of Plenty District	0	21	32	12	2	0	8	0	0	0	0	75
Rotorua District	24	0	144	1	8	9	44	0	0	0	1	231
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	0	29	76	69	2	23	36	0	0	0	0	235
Opotiki District	2	0	0	0	0	1	0	0	0	0	0	3
Region total	146	297	318	149	43	55	129	0	1	0	13	1 151
EAST COAST WOOD SUPPLY REGION												
Gisborne District	33	29	71	42	45	3	23	24	29	5	4	308
Region total	33	29	71	42	45	3	23	24	29	5	4	308
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	0	0	147	24	0	0	0	0	0	0	13	185
Hastings District	19	91	C	C	9	0	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	C	C	0	0	25	0	0	0	0	38
Region total	19	91	169	56	7	2	26	0	0	0	13	383
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	5	0	0	0	0	0	0	0	0	5
Wanganui District	23	0	95	2	0	0	C	C	12	0	0	141
Rangitikei District	3	4	22	14	1	9	C	C	69	26	0	169
Manawatu District	0	0	0	10	5	7	9	1	2	0	1	35
Palmerston North City	26	0	0	0	0	0	0	0	0	0	0	26
Taranua District	0	0	0	0	0	0	0	0	0	0	0	0
Masterton District	0	5	3	17	11	0	3	0	0	0	0	38
Horowhenua District	0	6	0	6	0	1	0	1	0	0	1	16
Carterton District	0	0	2	0	0	0	0	0	0	0	0	3
South Wairarapa District	0	0	2	0	0	1	0	2	0	0	0	5
Kapiti Coast District	0	0	0	1	0	0	0	0	0	0	0	1
Upper Hutt City	0	0	0	1	0	2	62	0	0	0	0	65
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
Region total	99	16	129	51	21	20	104	12	83	26	4	565
North Island total	311	452	781	371	313	94	290	48	118	31	34	2 842

TABLE 9.12: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	1	0	C	C	5	0	0	0	0	0	7	25
Tasman District	4	5	14	29	60	1	0	0	0	0	0	113
Marlborough District	10	12	C	C	27	5	17	2	1	0	5	208
Kaikoura District	0	0	8	0	0	0	0	0	0	0	0	8
Region total	15	17	89	103	92	6	17	2	1	0	12	354
WEST COAST WOOD SUPPLY REGION												
Buller District	0	0	0	3	2	0	11	0	0	0	10	26
Grey District	0	41	105	21	17	28	86	10	0	12	1	321
Westland District	0	990	1 220	1 312	484	68	265	22	0	0	1	4 362
Region total	0	1 031	1 325	1 336	503	96	362	32	0	12	12	4 709
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	1	59	34	C	C	1	0	0	0	2	7	116
Waimakariri District	0	0	0	8	12	5	0	0	0	0	0	25
Christchurch City	0	0	0	C	C	0	3	0	0	1	0	207
Selwyn District	0	0	0	5	7	0	0	0	0	0	0	12
Ashburton District	0	0	2	14	6	2	0	0	0	0	0	24
Timaru District	0	0	13	11	12	0	5	0	0	0	0	41
Mackenzie District	0	0	4	0	22	0	0	0	0	0	0	26
Waimate District	0	0	14	8	5	19	0	0	0	0	0	46
Region total	1	59	67	121	204	27	8	0	0	3	7	497
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	16	5	6	25	3	13	0	1	0	0	4	73
Dunedin City	0	12	16	11	58	77	7	0	0	0	0	181
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	0	0	4	0	0	0	0	0	0	4
Clutha District	93	162	298	218	111	99	94	1	1	4	0	1 081
Gore District	0	0	0	14	0	0	0	0	0	0	0	14
Southland District	47	47	58	100	12	9	110	2	0	0	0	385
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	156	226	378	368	188	198	211	4	1	4	4	1 738
South Island total	172	1 333	1 859	1 928	987	327	598	38	2	19	35	7 297
New Zealand total	483	1 785	2 640	2 298	1 300	421	888	86	120	50	69	10 140

Note

1. Net stocked planted production forest area.
2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.13: AREA PLANTED IN CYPRESS SPECIES BY WOOD SUPPLY REGION

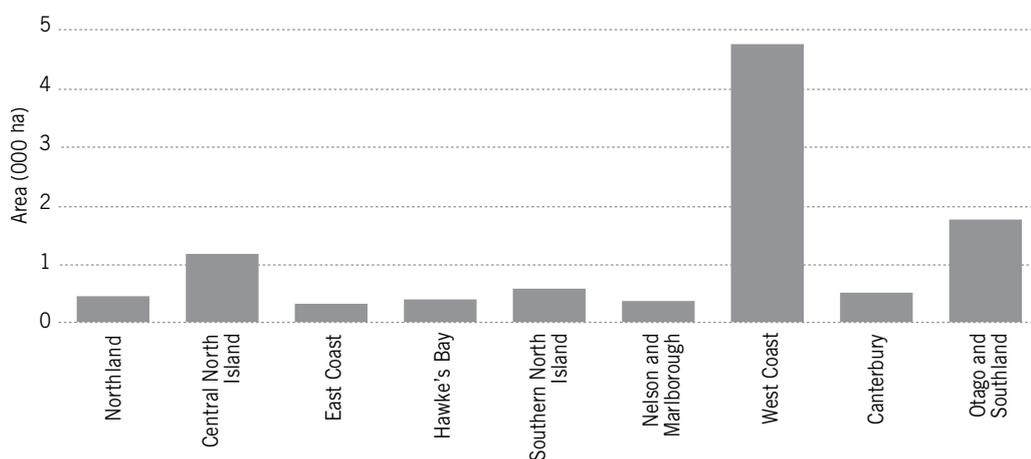


TABLE 9.13: AREA¹ PLANTED IN OTHER SOFTWOODS² BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	3	0	101	87	60	9	31	3	11	18	36	359
Whangarei District	2	0	19	117	38	5	0	1	3	12	16	213
Kaipara District	0	0	24	57	10	33	2	0	2	1	18	147
Auckland Council	0	2	43	43	56	8	27	12	18	10	4	223
Region total	5	2	187	304	164	55	60	16	34	41	74	942
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	1	0	6	6	17	2	17	3	5	2	36	95
Hauraki District	1	23	18	16	0	0	1	0	8	0	0	67
Waikato District	0	5	66	36	19	12	4	0	11	5	31	189
Matamata-Piako District	1	0	6	12	5	0	1	0	0	0	3	28
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	0	0	6	38	19	2	1	1	0	0	1	68
Otorohanga District	0	0	5	7	22	24	3	0	3	0	0	64
Waitomo District	0	1	11	30	38	1	5	0	4	14	8	112
Ruapehu District	2	5	29	220	118	5	9	77	12	0	15	492
South Waikato District	5	0	0	0	2	26	1	0	3	0	43	80
Taupo District	119	58	12	48	47	18	53	44	93	20	25	537
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay Of Plenty District	16	14	34	121	68	0	2	1	0	7	3	266
Rotorua District	75	40	23	136	64	27	70	25	20	13	40	533
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	15	0	11	23	23	7	17	11	4	20	9	140
Opotiki District	4	0	2	0	3	1	0	1	0	0	0	11
Region total	239	146	229	693	445	125	184	163	163	81	214	2 682
EAST COAST WOOD SUPPLY REGION												
Gisborne District	186	66	111	37	80	6	44	166	78	269	7	1 051
Region total	186	66	111	37	80	6	44	166	78	269	7	1 051
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	179	24	81	27	C	0	4	C	14	35	3	463
Hastings District	66	90	22	51	C	8	35	C	9	0	14	368
Napier City	0	0	0	0	0	0	2	0	0	0	0	2
Central Hawke's Bay District	1	1	21	34	13	16	10	0	9	16	41	162
Region total	246	115	124	112	104	24	51	79	32	51	58	995
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	60	130	130	333	21	9	3	3	3	0	0	693
Stratford District	393	3	11	3	9	0	1	0	1	0	0	421
South Taranaki District	0	1	26	30	32	7	0	0	0	0	3	99
Wanganui District	0	3	111	45	56	2	C	C	13	6	1	252
Rangitikei District	400	94	252	142	19	C	C	C	0	9	11	976
Manawatu District	0	1	40	22	24	6	14	3	0	2	8	120
Palmerston North City	14	0	0	0	0	1	0	0	0	0	0	15
Taranua District	4	0	12	18	7	C	C	7	1	0	2	313
Masterton District	4	11	48	60	45	10	43	18	10	39	4	292
Horowhenua District	0	7	5	7	18	10	0	3	0	1	0	51
Carterton District	0	0	1	15	12	3	1	0	13	30	0	75
South Wairarapa District	0	0	8	10	1	4	0	1	0	5	0	29
Kapiti Coast District	0	0	7	9	12	C	C	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	2	0	2	0	0	0	0	0	4
Region total	875	250	652	699	269	98	340	49	43	110	29	3 414
North Island total	1 551	579	1 303	1 845	1 062	308	679	473	350	553	381	9 083

TABLE 9.13: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	0	0	0	1	1	0	38	12	8	9	13	82
Tasman District	2	49	128	80	153	41	157	162	67	6	24	869
Marlborough District	C	5	C	119	68	34	23	8	22	0	1	410
Kaikoura District	0	0	0	7	0	0	0	1	0	0	0	8
Region total	C	54	C	207	222	75	218	183	97	15	38	1 369
WEST COAST WOOD SUPPLY REGION												
Buller District	0	0	1	6	29	0	37	93	16	0	5	187
Grey District	0	0	2	4	5	19	92	93	99	89	0	403
Westland District	0	1	80	170	34	0	23	22	4	32	0	366
Region total	0	1	83	180	68	19	152	208	119	121	5	956
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	9	543	676	57	44	8	508	150	209	30	83	2 317
Waimakariri District	2	21	0	16	127	15	5	7	12	1	0	206
Christchurch City	0	0	38	83	936	47	22	3	4	2	6	1 141
Selwyn District	0	0	12	87	144	C	C	2	7	14	2	321
Ashburton District	0	1	18	70	36	C	C	0	0	30	4	229
Timaru District	0	46	8	230	120	162	121	3	5	15	2	712
Mackenzie District	C	25	8	58	229	71	141	C	159	102	15	873
Waimate District	C	15	56	168	59	12	212	C	4	6	0	651
Region total	74	651	816	769	1 695	421	1 026	285	400	200	112	6 450
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	55	69	23	114	101	1	26	C	0	C	1	406
Dunedin City	73	4	1	7	75	13	1	25	0	2	27	228
Queenstown-Lakes District	0	3	5	1	22	10	0	0	0	3	0	44
Central Otago District	257	52	58	228	480	103	114	C	387	C	28	2 021
Clutha District	107	39	65	272	222	71	204	59	19	21	58	1 137
Gore District	0	4	2	4	141	0	0	0	0	0	0	151
Southland District	C	5	C	43	175	36	109	335	28	1	13	895
Invercargill City	0	0	0	0	3	0	0	0	0	0	0	3
Region total	C	176	C	669	1 219	234	454	662	434	119	127	4 885
South Island total	660	882	1 370	1 820	3 204	749	1 850	1 338	1 050	455	282	13 660
New Zealand total	2 211	1 460	2 673	3 664	4 266	1 057	2 529	1 811	1 400	1 008	663	22 743

Note

1. Net stocked planted production forest area.
2. Softwoods other than radiata pine, Douglas-fir and cypresses.
3. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.14: AREA PLANTED IN OTHER SOFTWOODS BY WOOD SUPPLY REGION

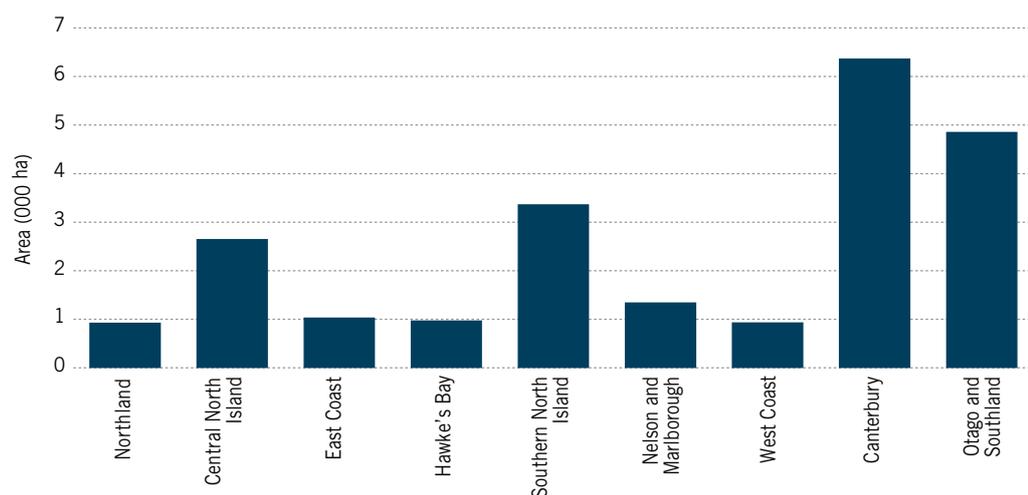


TABLE 9.14: AREA¹ PLANTED IN EUCALYPT SPECIES BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	0	17	17	2	49	79	44	3	0	5	221
Whangarei District	0	0	0	0	41	6	12	58	0	0	1	118
Kaipara District	0	0	0	0	151	0	3	1	15	0	0	170
Auckland Council	0	27	10	0	12	4	12	7	3	4	0	79
Region total	5	27	27	17	206	59	106	110	21	4	6	588
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	0	0	0	0	0	0	46	42	10	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
Waipa District	0	0	0	0	0	0	0	0	0	0	0	0
Otorohanga District	0	0	0	0	0	4	0	0	0	0	0	4
Waitomo District	86	0	0	0	2	1	0	0	0	0	1	90
Ruapehu District	0	0	1	3	0	0	2	0	0	0	1	7
South Waikato District	2 160	206	380	268	14	166	0	1	4	0	0	3 199
Taupo District	787	554	209	210	247	22	52	3	5	206	1	2 296
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay Of Plenty District	0	5	57	122	3	5	32	1	0	66	11	302
Rotorua District	3	92	0	40	1	0	25	2	0	0	9	172
Kawerau District	0	0	0	31	0	0	0	0	0	0	0	31
Whakatane District	0	0	159	84	53	15	0	1	1	0	0	313
Opotiki District	0	0	0	0	0	7	1	1	0	0	0	9
Region total	3 036	857	806	759	321	220	160	51	20	272	32	6 534
EAST COAST WOOD SUPPLY REGION												
Gisborne District	416	268	0	29	4	49	77	16	9	1	6	875
Region total	416	268	0	29	4	49	77	16	9	1	6	875
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	128	48	142	0	0	0	0	0	1	0	0	320
Hastings District	47	304	3	1	3	2	26	0	7	1	0	394
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	4	11	0	0	144
Region total	175	479	147	1	9	2	26	4	19	1	0	864
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	1	18	0	0	0	19
Rangitikei District	8	6	1	6	7	1	4	0	0	0	0	31
Manawatu District	1	0	0	10	1	0	0	0	0	0	0	12
Palmerston North City	10	0	0	0	0	0	0	0	0	0	0	10
Taranua District	270	0	0	0	0	0	0	0	0	0	0	270
Masterton District	13	5	2	4	2	0	2	0	0	0	0	27
Horowhenua District	4	0	0	0	1	0	19	2	0	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	14	0	123	0	0	0	137
Kapiti Coast District	0	0	0	0	0	0	0	0	0	0	0	0
Upper Hutt City	0	2	0	0	0	3	12	1	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
Region total	306	15	3	20	11	19	38	144	0	0	2	555
North Island total	3 938	1 646	983	826	551	349	407	325	69	278	46	9 417

TABLE 9.14: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	0	0	0	0	0	1	16	1	2	0	0	20
Tasman District	0	0	0	2	6	2	96	166	27	0	3	302
Marlborough District	80	14	8	3	24	24	41	58	1	2	1	256
Kaikoura District	0	0	0	0	0	0	0	0	0	0	0	0
Region total	80	14	8	5	30	27	153	225	30	2	4	578
WEST COAST WOOD SUPPLY REGION												
Buller District	0	0	0	0	0	0	80	252	16	0	7	355
Grey District	0	0	0	0	3	0	0	21	61	1	0	86
Westland District	0	0	0	3	0	1	11	28	0	0	0	43
Region total	0	0	0	3	3	1	91	301	77	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	15	21	3	0	0	0	0	10	49
Selwyn District	0	0	2	0	0	2	5	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	10	0	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	15	43	6	10	0	0	0	10	109
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	25	20	5	0	0	48	23	10	1	0	1	133
Dunedin City	0	0	0	0	11	23	28	9	1	0	0	72
Queenstown-Lakes District	0	0	0	0	0	0	0	0	0	0	0	0
Central Otago District	0	0	0	0	1	0	9	21	0	0	0	31
Clutha District	32	57	5	749	5	13	180	34	9	0	8	1 092
Gore District	0	97	0	573	0	35	0	0	0	0	0	705
Southland District	2 131	1 171	1 337	3 796	1 361	676	43	29	16	0	1	10 561
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	2 188	1 345	1 347	5 118	1 378	795	283	103	27	0	10	12 594
South Island total	2 274	1 359	1 374	5 141	1 454	829	537	629	134	3	31	13 765
New Zealand total	6 212	3 005	2 357	5 967	2 004	1 178	944	954	203	281	77	23 182

Note

1. Net stocked planted production forest area.

2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.15: AREA PLANTED IN EUCALYPT SPECIES BY WOOD SUPPLY REGION

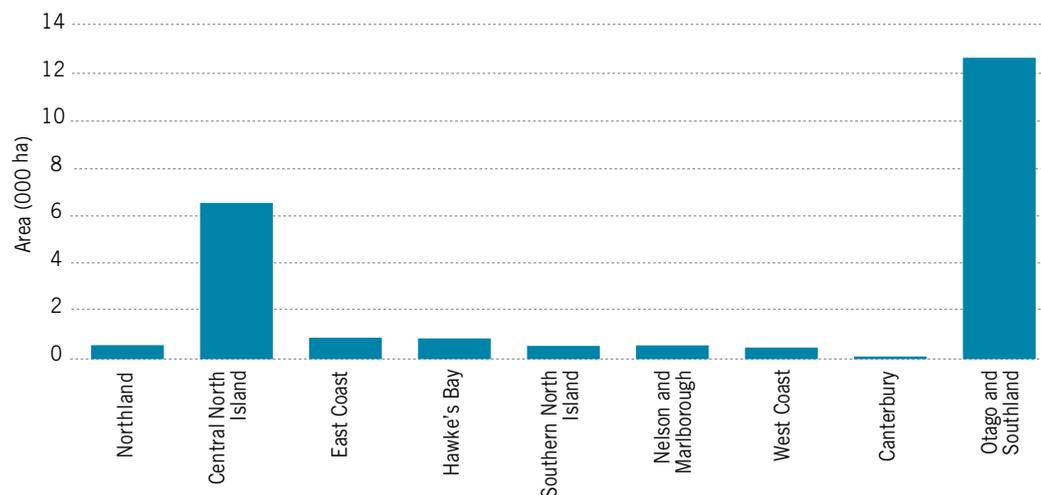


TABLE 9.15: AREA¹ PLANTED IN OTHER HARDWOODS BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	5	280	251	113	22	131	52	20	1	3	883
Whangarei District	3	0	14	138	143	15	11	13	3	0	2	342
Kaipara District	0	1	42	225	50	40	17	9	13	0	0	397
Auckland Council	0	12	47	222	155	60	82	68	31	7	9	693
Region total	8	18	383	836	461	137	241	142	67	8	14	2 315
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	0	0	3	2	34	2	8	8	2	0	2	61
Hauraki District	3	40	0	17	7	0	0	0	0	0	6	73
Waikato District	0	5	C	4	41	C	6	1	4	0	1	128
Matamata-Piako District	0	0	3	5	14	2	1	0	0	0	0	25
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	0	0	47	140	13	2	2	9	0	0	0	213
Otorohanga District	0	0	12	8	17	15	21	0	0	0	2	75
Waitomo District	0	0	7	22	38	4	7	1	2	0	0	81
Ruapehu District	0	0	1	5	0	0	0	1	0	0	0	7
South Waikato District	8	9	25	26	20	3	3	0	0	2	0	96
Taupo District	16	1	32	111	52	6	12	10	9	0	0	249
Tauranga District	0	0	2	8	1	1	1	0	0	0	0	13
Western Bay Of Plenty District	0	14	33	34	58	36	56	14	0	1	0	246
Rotorua District	10	0	C	242	83	C	89	6	29	1	10	564
Kawerau District	0	0	0	3	0	0	0	0	0	0	0	3
Whakatane District	0	0	48	87	50	21	6	2	0	2	0	216
Opotiki District	1	4	9	10	5	3	0	0	0	0	0	32
Region total	38	73	329	724	433	148	212	52	46	6	21	2 082
EAST COAST WOOD SUPPLY REGION												
Gisborne District	151	31	13	41	85	102	67	28	15	6	7	546
Region total	151	31	13	41	85	102	67	28	15	6	7	546
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	95	0	19	1	C	21	18	C	0	3	0	161
Hastings District	3	304	38	41	C	30	18	C	13	2	4	482
Napier City	0	0	0	0	0	0	2	0	0	0	0	2
Central Hawke's Bay District	6	0	8	23	25	4	64	0	1	3	4	138
Region total	104	304	65	65	49	55	102	9	14	8	8	783
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	1	0	14	18	18	3	4	1	0	0	0	59
Stratford District	31	3	6	9	46	1	1	0	0	0	0	97
South Taranaki District	0	0	6	24	19	4	2	2	0	0	0	57
Wanganui District	0	1	12	32	33	5	1	1	4	0	6	95
Rangitikei District	0	0	7	60	37	C	C	4	2	38	6	181
Manawatu District	0	0	10	17	28	10	23	16	0	0	1	105
Palmerston North City	0	0	8	2	52	0	0	0	0	0	0	62
Taranua District	0	0	12	15	10	C	C	8	0	3	0	64
Masterton District	51	10	21	8	17	14	9	5	0	0	0	136
Horowhenua District	0	0	1	10	59	3	1	0	0	2	13	89
Carterton District	0	0	1	0	5	8	0	20	4	0	0	38
South Wairarapa District	0	0	1	3	33	53	5	9	0	0	0	104
Kapiti Coast District	0	0	2	11	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	1	1	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
Region total	83	14	101	209	376	134	64	68	10	43	26	1 128
North Island total	384	440	891	1 875	1 404	575	686	299	152	71	76	6 854

TABLE 9.15: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	0	0	0	0	5	5	0	0	3	2	0	15
Tasman District	0	3	11	69	84	51	28	53	23	40	6	368
Marlborough District	C	0	C	24	95	28	53	23	9	1	5	263
Kaikoura District	0	0	0	0	0	0	0	3	0	0	0	3
Region total	C	3	C	93	184	84	81	79	35	43	11	650
WEST COAST WOOD SUPPLY REGION												
Buller District	0	0	0	4	7	0	94	0	0	0	1	106
Grey District	0	84	34	1	5	6	45	2	0	0	0	177
Westland District	0	70	127	125	619	502	359	2	0	0	0	1 804
Region total	0	154	161	130	631	508	498	4	0	0	1	2 087
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	0	0	21	C	C	5	10	0	1	0	0	76
Waimakariri District	0	0	0	14	90	17	2	0	0	0	0	123
Christchurch City	0	1	252	168	495	14	21	11	0	0	0	962
Selwyn District	0	0	1	C	C	C	C	1	1	3	0	64
Ashburton District	0	0	0	10	6	C	C	0	0	0	0	30
Timaru District	0	0	5	27	16	14	2	0	40	0	10	114
Mackenzie District	0	0	2	7	30	0	2	3	0	0	18	62
Waimate District	0	0	3	15	20	11	2	0	0	6	1	58
Region total	0	1	284	264	717	80	48	15	42	9	29	1 489
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	22	2	2	12	47	1	14	6	0	0	3	109
Dunedin City	0	0	2	2	33	10	8	6	0	0	19	80
Queenstown-Lakes District	0	0	0	0	0	3	0	0	0	0	0	3
Central Otago District	6	0	0	14	59	3	5	1	0	0	1	89
Clutha District	0	0	9	27	26	33	28	14	6	2	21	166
Gore District	0	0	4	3	3	6	0	0	0	0	0	16
Southland District	C	0	C	91	77	23	10	5	0	1	2	233
Invercargill City	0	0	0	0	0	0	0	0	0	0	0	0
Region total	C	2	C	149	245	79	65	32	6	3	46	696
South Island total	40	160	511	636	1 777	751	692	130	83	55	87	4 921
New Zealand total	424	600	1 402	2 785	3 181	1 327	1 378	429	234	126	163	11 775

Note

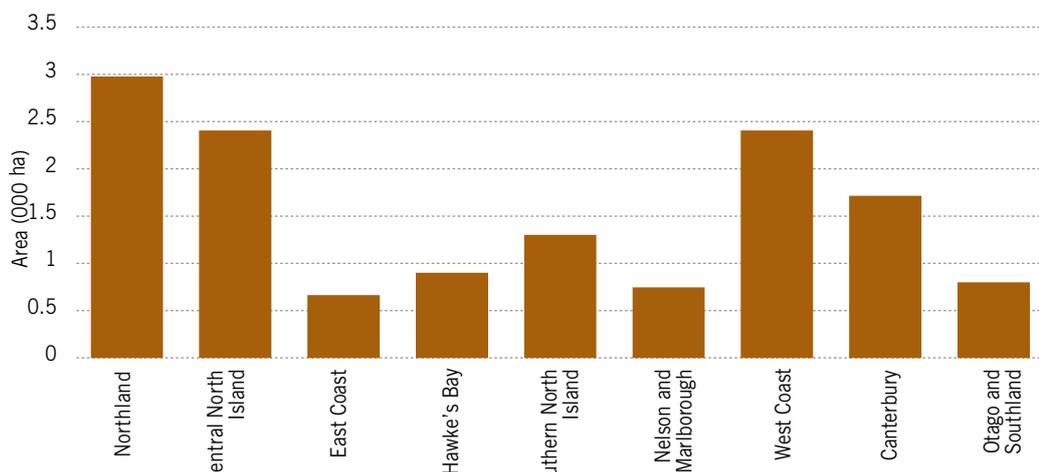
1. Net stocked planted production forest area.

2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.16: AREA PLANTED IN OTHER HARDWOODS BY WOOD SUPPLY REGION





RADIATA PINE TENDING REGIME

This section presents detailed information for each radiata pine NEFD tending regime, showing the forest area for each territorial authority by five-yearly age class. Figure 9.17 provides an overview of this, illustrating the radiata pine tending regime breakdown by age class.

The four tables that follow show the area:

- Pruned with production thinning;
- Pruned without production thinning;
- Unpruned with production thinning;
- Unpruned without production thinning.

FIGURE 9.17: RADIATA PINE FOREST AREA BY AGE CLASS AND TENDING REGIME, AS AT 1 APRIL 2016

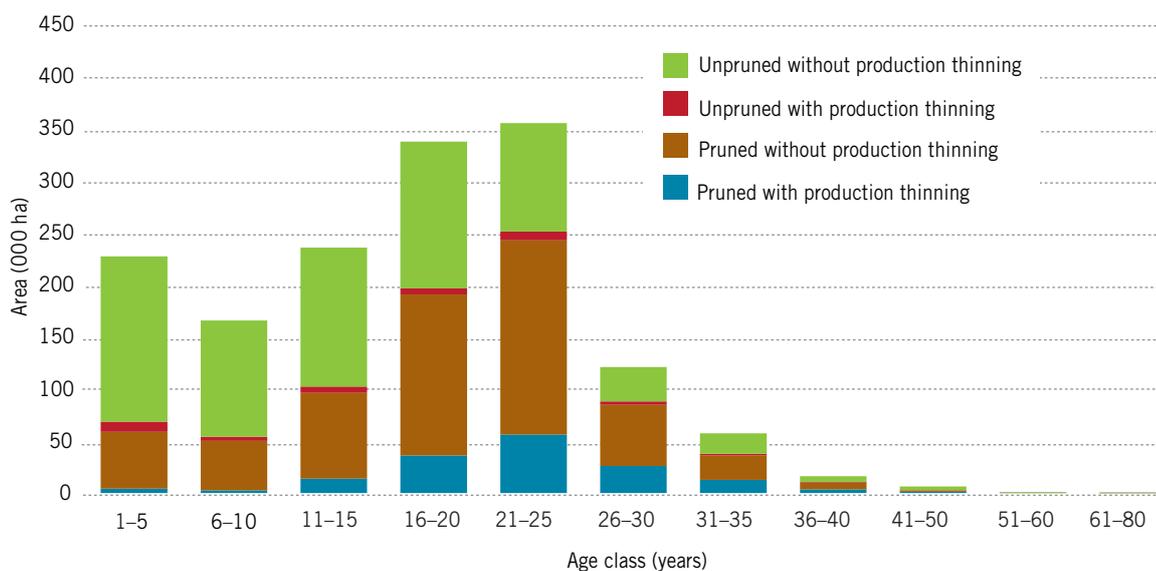


TABLE 9.16: AREA¹ OF RADIATA PINE PRUNED WITH PRODUCTION THINNING, BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	461	299	291	1 307	1 485	3 107	3 282	212	36	0	0	10 480
Whangarei District	13	4	201	767	1 212	350	57	110	237	0	1	2 952
Kaipara District	80	1	40	1 064	1 722	950	27	75	19	0	4	3 982
Auckland Council	58	33	259	1 289	1 755	129	210	379	102	4	0	4 218
Region total	612	337	791	4 427	6 174	4 536	3 576	776	394	4	5	21 632
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	C	C	39	116	358	45	C	34	44	0	0	802
Hauraki District	C	C	13	105	311	8	11	24	0	0	0	494
Waikato District	26	17	806	1 575	761	152	21	35	2	0	0	3 395
Matamata-Piako District	0	0	21	72	75	22	16	9	1	0	0	216
Hamilton City	0	0	0	0	0	0	1	0	0	0	0	1
Waipa District	97	0	37	348	336	29	25	25	3	0	0	900
Otorohanga District	0	0	73	122	419	47	17	13	0	0	0	691
Waitomo District	72	C	132	1 198	1 209	144	C	30	0	0	0	2 912
Ruapehu District	0	110	428	2 071	2 026	165	116	47	0	0	0	4 963
South Waikato District	0	0	11	53	123	7	71	1	2	0	0	268
Taupo District	329	477	3 554	4 748	2 518	9 752	3 660	281	15	0	0	25 334
Tauranga District	0	0	1	2	6	0	5	0	0	0	0	14
Western Bay Of Plenty District	115	82	270	471	1 315	469	96	51	0	0	0	2 869
Rotorua District	48	6	819	683	1 257	1 191	77	159	5	1	8	4 254
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	50	26	892	891	2 447	2 559	42	35	7	0	0	6 949
Opotiki District	0	5	2	7	34	0	0	11	0	0	0	59
Region total	763	787	7 098	12 462	13 195	14 590	4 383	755	79	1	8	54 121
EAST COAST WOOD SUPPLY REGION												
Gisborne District	27	1	243	984	2 534	560	210	111	13	0	0	4 683
Region total	27	1	243	984	2 534	560	210	111	13	0	0	4 683
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	176	33	31	199	701	32	C	C	9	0	0	1 322
Hastings District	717	42	189	474	3 441	289	C	C	26	0	1	5 618
Napier City	0	0	0	6	0	0	2	0	0	0	0	8
Central Hawke's Bay District	157	75	182	1 074	2 022	219	246	240	52	0	0	4 267
Region total	1 050	150	402	1 753	6 164	540	678	390	87	0	1	11 215
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	1	1	91	139	329	171	103	28	3	1	0	867
Stratford District	0	3	88	88	920	68	6	19	4	0	1	1 197
South Taranaki District	216	45	449	1 570	867	214	118	156	9	2	3	3 649
Wanganui District	94	78	942	3 183	2 429	1 048	171	43	49	0	0	8 037
Rangitikei District	98	90	440	629	2 652	397	335	132	43	4	0	4 818
Manawatu District	98	29	218	379	1 202	242	195	105	23	2	0	2 493
Palmerston North City	C	22	157	132	230	31	4	62	C	0	0	647
Tararua District	551	593	140	245	1 508	267	261	88	24	0	0	3 677
Masterton District	55	1	160	238	980	101	15	45	18	0	4	1 617
Horowhenua District	0	5	90	169	1 135	313	205	58	19	5	1	2 000
Carterton District	0	0	29	16	75	7	11	1	4	0	0	143
South Wairarapa District	C	5	88	136	122	21	24	10	C	0	0	445
Kapiti Coast District	36	0	147	324	483	21	45	26	1	0	0	1 083
Upper Hutt City	0	0	12	94	85	49	46	10	6	0	24	326
Porirua City	0	0	0	14	108	32	132	7	0	0	0	293
Wellington City	0	68	0	23	39	38	2	2	0	0	0	172
Lower Hutt City	0	0	0	46	0	3	0	20	9	0	0	78
Region total	1 177	940	3 051	7 425	13 164	3 023	1 673	812	232	14	33	31 542
North Island total	3 629	2 215	11 590	27 094	41 231	23 253	10 523	2 844	805	19	47	123 248

TABLE 9.16: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	0	0	0	5	90	0	0	0	0	0	0	95
Tasman District	70	81	209	787	1 771	292	217	66	25	0	1	3 519
Marlborough District	183	88	339	1 746	3 255	421	646	108	46	0	0	6 832
Kaikoura District	0	0	4	50	88	8	4	7	0	0	0	161
Region total	253	169	552	2 588	5 204	721	867	181	71	0	1	10 607
WEST COAST WOOD SUPPLY REGION												
Buller District	0	0	1	28	69	2	0	0	0	0	0	100
Grey District	20	90	0	19	172	0	51	82	2	0	0	436
Westland District	0	0	4	47	36	0	23	0	0	0	0	110
Region total	20	90	5	94	277	2	74	82	2	0	0	646
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	C	C	373	779	1 401	300	262	128	56	58	0	3 399
Waimakariri District	0	3	34	187	1 003	148	80	4	0	26	0	1 485
Christchurch City	73	0	190	594	670	145	138	22	3	0	0	1 834
Selwyn District	C	C	C	163	485	149	74	50	C	0	0	957
Ashburton District	0	2	C	104	147	22	41	13	C	0	0	382
Timaru District	24	1	96	371	410	174	79	38	25	3	0	1 221
Mackenzie District	0	0	21	87	163	22	50	6	1	0	0	350
Waimate District	12	5	42	346	185	133	58	12	2	0	0	795
Region total	124	45	788	2 631	4 464	1 093	782	273	138	87	0	10 423
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	5	6	121	292	882	64	62	115	26	0	0	1 573
Dunedin City	18	13	39	148	827	165	26	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	44	30	99	39	103	3	5	0	37	360
Clutha District	45	0	143	1 724	1 958	589	92	37	45	0	0	4 633
Gore District	0	0	10	218	449	17	3	17	18	0	0	732
Southland District	329	110	657	1 531	1 095	337	254	126	178	1	0	4 617
Invercargill City	0	0	3	1	62	0	0	1	0	0	0	67
Region total	397	129	1 017	3 944	5 387	1 211	571	364	272	1	37	13 329
South Island total	793	432	2 362	9 257	15 332	3 027	2 293	899	483	88	38	35 004
New Zealand total	4 422	2 647	13 947	36 307	56 563	26 276	12 813	3 743	1 288	107	85	158 197

Note

1. Net stocked planted production forest area.
2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.18: AREA OF RADIATA PINE PRUNED WITH PRODUCTION THINNING BY WOOD SUPPLY REGION

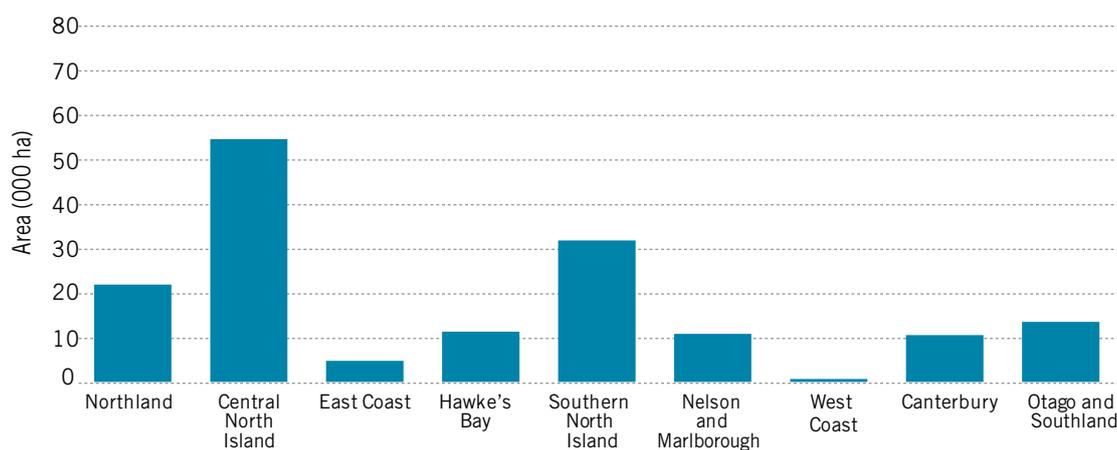


TABLE 9.17: AREA¹ OF RADIATA PINE PRUNED WITHOUT PRODUCTION THINNING BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	781	963	2 191	5 556	9 702	5 060	1 876	395	85	4	0	26 613
Whangarei District	375	62	432	2 702	2 930	863	126	112	6	0	2	7 610
Kaipara District	96	329	919	3 715	2 156	357	180	25	65	9	0	7 851
Auckland Council	741	1 084	2 252	2 440	2 279	148	296	662	58	22	2	9 984
Region total	1 993	2 438	5 794	14 413	17 067	6 428	2 478	1 194	214	35	4	52 058
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	C	C	134	150	719	76	C	69	3	0	0	1 886
Hauraki District	C	C	82	651	844	263	9	0	0	0	0	1 869
Waikato District	204	53	746	1 269	2 289	558	94	35	24	0	54	5 326
Matamata-Piako District	45	1	10	61	283	1	3	9	1	0	0	414
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	46	30	97	278	184	37	17	2	0	0	0	691
Otorohanga District	129	0	841	272	637	72	8	22	0	0	0	1 981
Waitomo District	7	C	1 610	4 048	3 510	480	C	32	3	0	0	9 776
Ruapehu District	2 975	67	1 437	3 423	2 356	2 191	1 312	55	0	0	0	13 816
South Waikato District	9	132	360	897	1 834	2 363	107	6	2	0	0	5 710
Taupo District	4 088	14 703	14 714	12 469	5 812	5 501	2 261	237	0	5	0	59 790
Tauranga District	0	0	9	26	32	16	0	0	0	0	0	83
Western Bay Of Plenty District	978	682	1 051	2 331	3 617	1 344	236	201	1	0	0	10 441
Rotorua District	2 280	4 184	3 760	5 616	3 861	1 729	180	35	13	0	1	21 659
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	2 148	3 289	2 792	10 529	12 597	2 946	739	342	9	1	0	35 392
Opotiki District	365	384	526	565	370	2 428	981	122	0	0	0	5 741
Region total	13 286	23 587	28 169	42 585	38 945	20 005	6 714	1 167	56	6	55	174 575
EAST COAST WOOD SUPPLY REGION												
Gisborne District	15 495	4 101	10 583	24 045	31 462	10 782	4 560	1 690	174	20	1	102 912
Region total	15 495	4 101	10 583	24 045	31 462	10 782	4 560	1 690	174	20	1	102 912
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	5 318	4 073	7 734	9 203	13 975	1 330	C	C	55	0	0	42 698
Hastings District	391	1 746	6 349	6 765	10 132	2 239	C	C	15	8	1	30 125
Napier City	0	0	0	39	14	0	0	0	0	0	0	53
Central Hawke's Bay District	200	479	947	2 519	2 098	405	93	46	16	3	0	6 806
Region total	7 909	6 298	15 030	18 526	26 218	3 974	1 299	329	86	11	1	79 682
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	59	116	301	458	442	44	16	25	4	0	0	1 465
Stratford District	157	9	107	337	1 551	25	35	1	0	0	0	2 222
South Taranaki District	69	24	256	644	2 283	368	36	42	0	0	0	3 722
Wanganui District	1 152	1 623	1 216	1 923	5 232	1 204	141	27	12	0	1	12 532
Rangitikei District	172	47	368	3 764	1 478	495	73	72	13	0	0	6 482
Manawatu District	32	19	225	254	980	74	62	61	23	0	0	1 730
Palmerston North City	C	53	1	10	261	6	10	10	C	0	0	654
Tararua District	1 264	39	656	652	1 073	189	69	73	125	3	0	4 143
Masterton District	2 165	1 936	2 743	5 609	7 774	1 692	2 042	176	102	4	4	24 247
Horowhenua District	81	124	184	94	687	77	17	5	21	0	0	1 289
Carterton District	1 065	829	634	2 310	1 514	475	92	87	6	0	0	7 012
South Wairarapa District	C	40	553	1 590	899	39	10	23	C	0	0	3 833
Kapiti Coast District	73	93	97	171	684	124	82	2	0	0	0	1 326
Upper Hutt City	23	28	352	223	343	11	14	11	8	0	1	1 014
Porirua City	10	3	123	18	252	82	0	4	5	0	0	497
Wellington City	0	0	8	30	253	5	12	0	0	0	0	308
Lower Hutt City	0	0	10	2	24	0	38	7	0	0	0	81
Region total	7 280	4 984	7 835	18 089	25 730	4 910	2 748	626	343	7	6	72 557
North Island total	45 962	41 407	67 411	117 658	139 422	46 099	17 800	5 006	873	79	67	481 783

TABLE 9.17: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	120	91	18	161	462	203	23	14	1	0	0	1 093
Tasman District	425	524	1 439	5 403	6 470	1 986	478	135	18	0	0	16 877
Marlborough District	713	980	2 924	6 788	10 428	3 492	1 175	294	122	68	0	26 985
Kaikoura District	47	0	59	326	285	7	2	39	0	0	0	765
Region total	1 305	1 595	4 440	12 678	17 645	5 688	1 678	482	141	68	0	45 720
WEST COAST WOOD SUPPLY REGION												
Buller District	160	0	14	533	488	239	6	36	4	0	0	1 480
Grey District	109	276	1 281	1 665	1 116	295	933	98	69	17	0	5 859
Westland District	0	134	688	1 114	1 056	52	58	33	57	0	0	3 192
Region total	269	410	1 983	3 312	2 660	586	997	167	130	17	0	10 531
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	62	67	417	1 551	1 445	237	255	151	20	5	0	4 207
Waimakariri District	299	85	153	147	612	86	25	5	0	0	0	1 413
Christchurch City	0	6	89	710	1 746	130	186	29	45	0	1	2 942
Selwyn District	0	8	37	461	371	41	62	4	2	0	0	986
Ashburton District	92	5	44	208	194	21	87	0	3	0	0	654
Timaru District	247	134	293	548	844	979	159	8	1	0	0	3 213
Mackenzie District	31	15	99	164	775	55	30	36	4	0	0	1 209
Waimate District	373	332	377	1917	781	397.1	173	0	0	0	0	4 350
Region total	1 104	652	1 509	5 705	6 767	1 946	977	233	75	5	1	18 974
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	947	315	2 014	2 836	1 386	909	375	44	73	6	9	8 913
Dunedin City	407	414	525	1 205	1 991	712	491	24	23	0	0	5 792
Queenstown-Lakes District	0	0	0	3	3	11	0	2	0	3	1	23
Central Otago District	0	5	C	C	553	12	94	56	16	0	0	919
Clutha District	3 183	1 700	3 463	8 512	11 499	2 217	1 208	226	97	5	2	32 112
Gore District	0	0	C	C	234	24	30	0	1	0	0	464
Southland District	1 631	1 227	1 443	3 455	5 367	855	170	266	31	0	0	14 445
Invercargill City	0	3	6	15	32	10	0	6	0	0	0	72
Region total	6 168	3 664	7 519	16 315	21 065	4 750	2 368	624	241	14	12	62 739
South Island total	8 845	6 321	15 451	38 011	48 136	12 970	6 019	1 506	587	104	13	137 964
New Zealand total	54 807	47 728	82 862	155 668	187 559	59 070	23 819	6 512	1 460	183	80	619 747

Note

1. Net stocked planted production forest area.
2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.19: AREA OF RADIATA PINE PRUNED WITHOUT PRODUCTION THINNING BY WOOD SUPPLY REGION

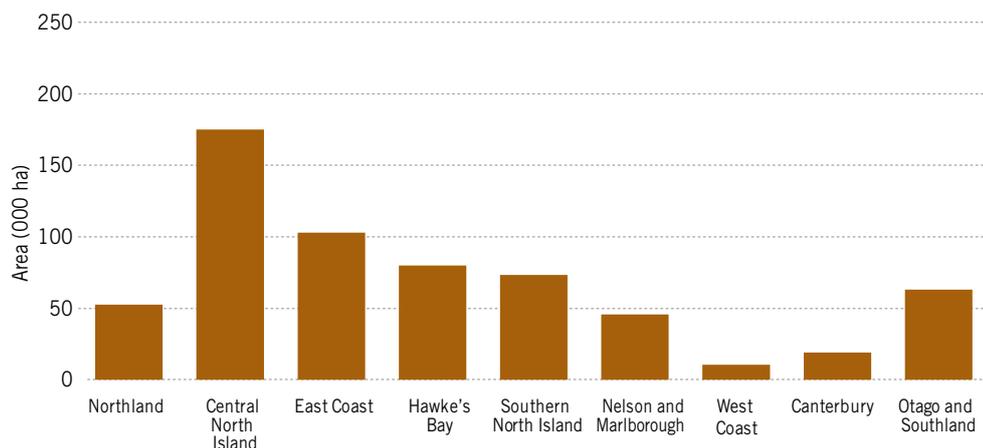


TABLE 9.18: AREA¹ OF RADIATA PINE UNPRUNED WITH PRODUCTION THINNING BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	582	1 919	1 931	555	44	0	49	80	0	0	0	5 160
Whangarei District	0	0	0	0	1	0	0	0	3	0	0	4
Kaipara District	0	0	26	17	71	422	28	0	0	0	0	564
Auckland Council	189	1	33	211	1 284	420	0	0	0	0	0	2 138
Region total	771	1 920	1 990	783	1 400	842	77	80	3	0	0	7 866
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	19	107	73	78	63	31	20	99	0	0	0	490
Hauraki District	0	0	0	0	0	0	0	0	0	0	0	0
Waikato District	0	0	0	3	11	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
Waipa District	0	0	6	44	24	0	0	0	0	0	0	74
Otorohanga District	0	0	13	8	8	2	0	0	0	0	0	31
Waitomo District	7	3	87	292	398	2	0	0	0	0	0	789
Ruapehu District	727	132	206	748	659	924	0	0	0	0	0	3 396
South Waikato District	0	0	4	9	20	0	0	0	0	0	0	33
Taupo District	3 429	215	162	398	490	859	278	0	5	0	0	5 836
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay Of Plenty District	9	0	53	90	76	0	12	0	0	0	0	240
Rotorua District	1 019	142	7	62	151	0	1	0	0	0	1	1 383
Kawerau District	0	0	0	0	0	0	0	0	0	0	0	0
Whakatane District	2 028	30	62	53	292	17	23	0	0	0	0	2 505
Opotiki District	0	0	12	12	2	0	40	0	0	0	0	66
Region total	7 238	629	685	1 797	2 194	1 835	374	99	5	0	1	14 857
EAST COAST WOOD SUPPLY REGION												
Gisborne District	736	0	40	13	377	18	215	20	18	0	0	1 437
Region total	736	0	40	13	377	18	215	20	18	0	0	1 437
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	0	0	8	146	320	0	71	0	0	0	0	545
Hastings District	282	0	6	61	526	11	0	0	7	0	0	893
Napier City	0	0	0	0	0	0	0	0	0	0	0	0
Central Hawke's Bay District	13	0	1	23	8	7	15	3	1	0	0	71
Region total	295	0	15	230	854	18	86	3	8	0	0	1 509
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	2	0	4	6	73	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	103	145	1	20	176	10	79	0	0	0	0	534
Rangitikei District	99	234	891	831	508	18	0	6	3	0	2	2 592
Manawatu District	0	0	1	1	10	0	8	0	0	0	0	20
Palmerston North City	0	0	0	1	41	0	0	0	0	0	0	42
Tararua District	0	1	18	63	154	19	18	5	6	0	0	284
Masterton District	36	89	82	88	149	11	29	2	0	0	0	486
Horowhenua District	139	241	379	307	284	6	0	1	2	25	7	1 391
Carterton District	0	0	0	5	3	0	3	0	0	0	0	11
South Wairarapa District	0	2	130	92	34	10	6	3	0	0	0	277
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	28	0	0	8	0	0	0	0	0	36
Lower Hutt City	0	0	0	0	0	10	54	18	0	0	0	82
Region total	379	712	1 534	1 414	1 454	92	200	35	13	25	9	5 867
North Island total	9 419	3 261	4 264	4 237	6 279	2 805	952	237	47	25	10	31 536

TABLE 9.18: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	0	0	0	4	8	0	0	0	0	0	0	12
Tasman District	71	41	261	275	483	26	105	72	14	9	0	1 357
Marlborough District	23	57	27	154	319	99	50	151	56	0	0	936
Kaikoura District	0	0	0	1	5	0	0	0	0	0	0	6
Region total	94	98	288	434	815	125	155	223	70	9	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	5	0	0	0	0	0	0	0	5
Westland District	0	0	0	0	0	0	0	4	0	0	0	4
Region total	0	0	0	5	0	0	0	4	0	0	0	9
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	30	210	114	253	397	65	26	44	4	30	0	1 173
Waimakariri District	0	0	11	37	129	25	12	5	8	3	2	232
Christchurch City	109	0	9	88	33	3	7	0	0	1	0	250
Selwyn District	0	0	118	262	138	12	6	19	4	0	1	560
Ashburton District	0	1	2	26	26	20	0	7	30	0	0	112
Timaru District	0	0	1	6	71	18	22	4	0	0	0	122
Mackenzie District	10	111	18	22	18	13	16	12	29	3	0	252
Waimate District	0	0	1	28	58	10	2	2	2	0	0	103
Region total	149	322	274	722	870	166	91	93	77	37	3	2 804
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	0	1	0	20	80	15	45	0	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	18	134	1 143	292	119	15	7	2	0	0	0	1 730
Gore District	0	0	0	6	38	0	0	0	0	0	0	44
Southland District	56	337	129	179	213	41	15	23	66	0	0	1 059
Invercargill City	0	0	1	5	5	0	0	0	0	0	0	11
Region total	74	472	1 273	503	463	71	67	25	66	0	0	3 014
South Island total	317	892	1 836	1 694	2 185	362	315	404	214	46	3	8 269
New Zealand total	9 736	4 153	6 100	5 901	8 427	3 166	1 265	582	260	71	13	39 675

Note

1. Net stocked planted production forest area.
2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.20: AREA OF RADIATA PINE UNPRUNED WITH PRODUCTION THINNING BY WOOD SUPPLY REGION

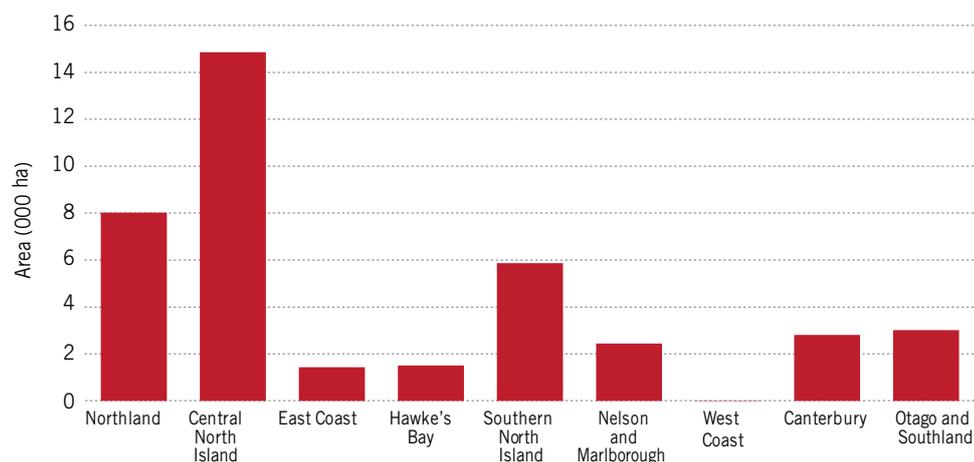


TABLE 9.19: AREA¹ OF RADIATA PINE UNPRUNED WITHOUT PRODUCTION THINNING BY TERRITORIAL AUTHORITY, AS AT 1 APRIL 2016

TERRITORIAL AUTHORITY	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	13 365	6 940	5 731	3 832	3 868	2 926	2 248	254	139	13	0	39 316
Whangarei District	6 005	2 945	2 837	2 210	1 656	1 131	1 361	101	41	2	0	18 289
Kaipara District	6 382	1 906	2 269	3 581	2 704	4 577	528	60	68	3	2	22 080
Auckland Council	1 782	3 168	5 762	5 464	3 536	295	247	98	31	14	11	20 408
Region total	27 534	14 959	16 599	15 087	11 764	8 929	4 384	513	279	32	13	100 093
CENTRAL NORTH ISLAND WOOD SUPPLY REGION												
Thames-Coromandel District	4 625	4 911	3 973	2 799	2 183	410	640	294	101	16	25	19 977
Hauraki District	286	27	262	130	135	8	4	5	1	0	0	858
Waikato District	1 168	1 141	821	2 249	2 449	258	166	7	16	8	0	8 283
Matamata-Piako District	64	344	25	7	45	30	17	58	2	0	0	592
Hamilton City	0	0	0	0	0	0	0	0	0	0	0	0
Waipa District	29	41	37	124	115	18	6	1	0	0	2	373
Otorohanga District	0	0	270	542	557	24	64	3	5	0	0	1 465
Waitomo District	111	2 629	1 913	1 111	1 736	139	132	27	0	0	0	7 798
Ruapehu District	6 177	1 718	1 884	10 826	2 773	2 118	748	265	19	1	0	26 529
South Waikato District	6 487	6 981	12 688	13 417	10 763	1 241	70	16	32	0	77	51 772
Taupo District	29 245	7 096	13 613	14 125	8 548	2 748	568	91	17	47	23	76 121
Tauranga District	0	0	0	0	0	0	0	0	0	0	0	0
Western Bay Of Plenty District	1 396	2 440	2 565	1 238	712	753	118	34	2	0	1	9 259
Rotorua District	5 675	3 726	6 283	3 864	2 748	585	64	44	24	0	8	23 021
Kawerau District	0	0	0	0	0	37	0	0	0	0	0	37
Whakatane District	13 467	14 272	11 554	12 825	4 309	55	66	15	10	21	9	56 603
Opotiki District	5 168	914	825	642	534	768	2 308	77	10	0	0	11 246
Region total	73 898	46 240	56 713	63 899	37 607	9 192	4 971	937	239	93	145	293 934
EAST COAST WOOD SUPPLY REGION												
Gisborne District	7 723	5 498	7 473	8 997	6 438	1 842	2 792	676	658	3	7	42 106
Region total	7 723	5 498	7 473	8 997	6 438	1 842	2 792	676	658	3	7	42 106
HAWKE'S BAY WOOD SUPPLY REGION												
Wairoa District	1 095	1 911	2 273	1 858	1 240	23	778	37	18	0	3	9 236
Hastings District	4 183	5 191	6 262	5 206	3 060	305	93	101	78	16	16	24 511
Napier City	0	0	0	0	1	0	6	0	0	0	0	7
Central Hawke's Bay District	422	53	293	2 298	523	210	184	54	60	14	6	4 117
Region total	5 700	7 155	8 828	9 362	4 824	538	1 061	192	156	30	25	37 871
SOUTHERN NORTH ISLAND WOOD SUPPLY REGION												
New Plymouth District	40	46	90	153	246	92	21	19	23	0	0	730
Stratford District	0	4	126	55	215	11	6	8	0	0	0	425
South Taranaki District	62	5	277	382	808	288	154	67	37	1	3	2 084
Wanganui District	1 247	687	1 214	1 224	1 392	31	55	55	7	0	9	5 921
Rangitikei District	236	126	492	2 860	637	88	61	99	210	80	0	4 889
Manawatu District	408	48	348	336	675	57	85	80	22	0	5	2 064
Palmerston North City	6	472	43	34	69	14	17	91	31	0	0	777
Tararua District	589	153	716	3 916	1 943	242	328	157	51	15	7	8 117
Masterton District	285	394	775	1 058	1 832	433	511	195	215	89	3	5 790
Horowhenua District	106	329	460	72	443	50	93	54	30	0	7	1 644
Carterton District	117	150	495	699	534	121	50	28	90	2	1	2 287
South Wairarapa District	569	77	573	521	1 378	570	192	81	90	1	1	4 053
Kapiti Coast District	0	0	108	144	15	260	120	21	0	0	0	668
Upper Hutt City	755	554	355	574	327	462	309	109	36	9	6	3 495
Porirua City	0	0	32	2	392	115	5	0	64	0	0	610
Wellington City	0	0	0	23	16	19	0	0	0	0	0	58
Lower Hutt City	0	0	0	2	26	0	58	18	5	0	0	109
Region total	4 420	3 045	6 104	12 055	10 948	28 53	2 065	1 082	911	197	42	43 721
North Island total	119 581	77 248	95 304	109 456	71 407	23 225	15 293	3 380	2 243	355	232	517 724

TABLE 9.19: CONTINUED...

TERRITORIAL AUTHORITY	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 & MARLBOROUGH WOOD SUPPLY REGION												
Nelson City	1 180	2 111	1 530	1 131	1 200	236	59	2	12	1	0	7 462
Tasman District	10 437	13 751	12 749	7 218	8 899	1 754	551	278	226	41	17	55 921
Marlborough District	11 073	4 940	4 625	4 042	6 122	1 633	461	277	165	32	2	33 372
Kaikoura District	0	0	25	32	11	0	16	14	0	2	0	100
Region total	22 690	20 802	18 929	12 423	16 231	3 623	1 087	571	403	76	19	96 855
WEST COAST WOOD SUPPLY REGION												
Buller District	685	289	160	152	74	34	52	36	7	0	0	1 489
Grey District	1 218	1 642	1 170	391	193	77	423	112	126	0	0	5 352
Westland District	922	1 338	382	429	18	17	69	239	133	1	0	3 548
Region total	2 825	3 269	1 712	972	285	128	544	387	266	1	0	10 389
CANTERBURY WOOD SUPPLY REGION												
Hurunui District	C	C	4 889	6 089	3 488	1 991	178	104	5	9	6	20 869
Waimakariri District	359	481	715	1 305	1 419	81	49	29	22	36	0	4 496
Christchurch City	408	272	334	376	488	238	141	98	20	1	22	2 397
Selwyn District	C	C	C	763	1 291	1 183	361	112	C	17	0	5 702
Ashburton District	336	259	C	221	151	25	66	12	C	8	20	1 361
Timaru District	112	124	90	321	766	217	43	10	11	0	0	1 694
Mackenzie District	8	38	32	76	201	21	12	5	44	12	0	449
Waimate District	499	279	202	523	337	137	328	40	26	23	14	2 408
Region total	4 880	3 829	6 992	9 675	8 141	3 893	1 177	410	210	106	62	39 376
OTAGO AND SOUTHLAND WOOD SUPPLY REGION												
Waitaki District	561	317	659	733	740	257	157	38	33	27	2	3 524
Dunedin City	3978	854	104	119	581	68	176	54	0	13	1	5 948
Queenstown-Lakes District	0	0	10	14	24	12	5	13	1	20	6	105
Central Otago District	0	0	C	C	314	23	36	36	10	5	12	620
Clutha District	2371	3897	5690	3220	2371	753	336	226	44	13	2	18 923
Gore District	0	6	C	C	376	32	24	24	26	1	0	925
Southland District	2715	2020	4580	4513	4307	1192	962	252	144	14	2	20 701
Invercargill City	0	0	2	4	0	10	8	2	0	0	0	26
Region total	9 625	7 094	11 192	9 076	8 713	2 347	1 704	645	258	93	25	50 772
South Island total	40 021	34 994	38 825	32 146	33 370	9 991	4 513	2 014	1 137	276	106	197 391
New Zealand total	159 602	112 242	134 129	141 602	104 777	33 216	19 806	5 393	3 380	631	338	715 116

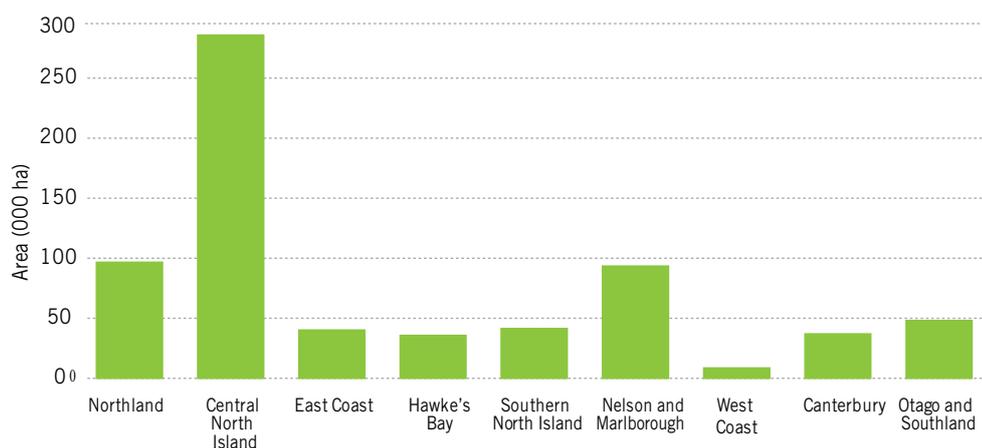
Note

1. Net stocked planted production forest area.
2. Individual entries may not add to totals due to rounding.

Symbol

C Confidential.

FIGURE 9.21: AREA OF RADIATA PINE UNPRUNED WITHOUT PRODUCTION THINNING BY WOOD SUPPLY REGION



APPENDIX 1: GLOSSARY

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 2016 if it was planted in the preceding 12-month period, that is, between 1 April 2015 and 31 March 2016.

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 does not meet the confidentiality criteria and one of the contributors to the confidential number is not prepared to waive the confidentiality rules then that number is not published.

Clear fell: To harvest all merchantable trees within a 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 and/or has been fertilised.
- "Unimproved pasture" is land with no improved pasture species that has not been fertilised.
- "Other woody land" is land predominantly covered in species such as bracken, gorse, manuka, kanuka 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: 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.

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 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.

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

Rotation number:

- The first rotation is stands 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 volume (in cubic metres) of wood contained in all live crop stems of all age classes. The standing volume includes some non-recoverable volume such as stumps and the non-merchantable tops of stems, but excludes bark.

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.

Radiata pine has four tending regime categories, Douglas-fir has two, and other softwoods and hardwoods are not assigned a tending regime.

The radiata pine tending regime categories are:

- pruned with production thinning;
- pruned without production thinning;
- unpruned with production thinning;
- unpruned without production thinning.

The Douglas-fir tending regime categories are:

- with production thinning;
- without production thinning.

“Pruned” refers to pruning carried out before age 12 so that more than 50 percent of the stems in the planned final crop stocking will contain a pruned butt log of not less than four metres in length.

“Production thinning” refers to the extraction of thinnings for commercial use. Stands that have been production thinned produce a smaller clear fell volume than stands that have not been production thinned.

Territorial authority: District and city council areas adopted in October 1989 (see Table 7.1 and Figures 7.1 and 7.2).

TRVIB: Total recoverable volume inside bark. This is the volume of wood recovered during harvesting, excluding bark, expressed in cubic metres.

Wood supply region: Zones in New Zealand where forest stands of the same species and tending regime are represented by the same generalised yield table. These regions reflect wood supply processing catchments, and reconcile with aggregates of territorial authorities.

Yield table: A tabular representation of forest yield in cubic metres per hectare. The yield table is expressed in terms of total standing volume, total recoverable volume and three log type volumes, together with any production thinning volumes by age (one to 80 years). There is a separate yield table for each crop type.

APPENDIX 2: 2016 NEFD QUESTIONNAIRE

Ministry for Primary Industries
Manatū Ahu Matua



ANNUAL SURVEY FOR NATIONAL EXOTIC FOREST DESCRIPTION AS AT 1 APRIL 2016

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 **Wednesday 29 June 2016**.

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:

- Section A** This section asks you to check your contact details and helps you work out which parts of the form you need to fill in. No contact information will go into any publication.
- Section 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.
- Section C** 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.
- Section D** 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

Peter Clark
New Zealand Forest Owners' Association

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 2015 and 31 March 2016, 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 2015 and 31 March 2016, 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 2015 and 31 March 2016, 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 2016

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 2016

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 2016

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 2016, 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 2016	Net stocked area (Ha)	Year Planted	Age in 2016	Net stocked area (Ha)	Year Planted	Age in 2016	Net stocked area (Ha)	Year Planted	Age in 2016	Net stocked area (Ha)
2015	1		1994	22		1973	43		1952	64	
2014	2		1993	23		1972	44		1951	65	
2013	3		1992	24		1971	45		1950	66	
2012	4		1991	25		1970	46		1949	67	
2011	5		1990	26		1969	47		1948	68	
2010	6		1989	27		1968	48		1947	69	
2009	7		1988	28		1967	49		1946	70	
2008	8		1987	29		1966	50		1945	71	
2007	9		1986	30		1965	51		1944	72	
2006	10		1985	31		1964	52		1943	73	
2005	11		1984	32		1963	53		1942	74	
2004	12		1983	33		1962	54		1941	75	
2003	13		1982	34		1961	55		1940	76	
2002	14		1981	35		1960	56		1939	77	
2001	15		1980	36		1959	57		1938	78	
2000	16		1979	37		1958	58		1937	79	
1999	17		1978	38		1957	59		1936	80	
1998	18		1977	39		1956	60		1935 or earlier	80+	
1997	19		1976	40		1955	61				
1996	20		1975	41		1954	62				
1995	21		1974	42		1953	63				
										Total Net Stocked Area	

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 C2 to C14.
- Contact survey support (see front page)

C2 Between 1 April 2015 and 31 March 2016, 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 2015.

	New Planted area for year ended 31 December 2015 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 2015 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 C4	<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 2015 and 31 March 2016, 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 2016, 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	ha	m ³	years	m ³
Douglas-fir	ha	m ³	years	m ³
Cypress species <small>includes macrocarpa, lusitanica and other cypress species</small>	ha	m ³	years	m ³
Other softwoods <small>include: conifers e.g. pine, fir, larch and redwood exclude: radiata pine, douglas-fir</small>	ha	m ³	years	m ³
Eucalypt <small>include: all eucalypt species</small>	ha	m ³	years	m ³
Other hardwoods <small>include: broad-leaved trees e.g. wattle, acacia (including Australian blackwood), walnut, oak, poplar, willow, paulownia, birch, alder or elm</small>	ha	m ³	years	m ³

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	Unpruned sawlogs	Pulp/chip logs	Total recovered
<input type="text"/> m ³			
	+		+
			=

SECTION C: continued PLANTING AND HARVESTING

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

C10 Between 1 April 2012 and 31 March 2016 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 2012 and 31 March 2016 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 2015 and 31 March 2016, 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 2015 and 31 March 2016, 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 2015 and 31 March 2016, 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

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.

2015 Information

This information can be found in your previous NEFD return

Net stocked area as at 1 April 2015		<input type="text"/>	ha
Area awaiting replanting on 31 March 2015	+	<input type="text"/>	ha
Area awaiting a land use decision on 31 March 2015	+	<input type="text"/>	ha
TOTAL forest area as at 1 April 2015	=	<input type="text"/>	ha

2016 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	C4
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	C13
Immature forest cleared for conversion to a non-forest land use	-	<input type="text"/>	ha	C14
Re-mapping adjustment	+ / -	<input type="text"/>	ha	Pls circle + or -
Net stocked area as at 1 April 2016	=	<input type="text"/>	ha	B7
Area awaiting replanting on 31 March 2016	+	<input type="text"/>	ha	C10
Area awaiting land use decision on 31 March 2016	+	<input type="text"/>	ha	C11
TOTAL forest area as at 1 April 2016	=	<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

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

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.

Your comments and feedback

Please write any comments that would help MPI interpret the information you have provided on the lines below, or you could email us at NEFD@mpi.govt.nz

MPI also appreciates any feedback you have on how to improve this questionnaire.

Thank you for taking the time to complete this NEFD survey

APPENDIX 3: NEW PLANTING

IMPUTATION METHODOLOGY

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 is 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. The methodology was reviewed in 2003 (Manley et al, 2003).

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 2016 calendar years because of the very low levels of new forest planting that took place in those years. Table 3.1 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 from the new planting collected in the postal survey. See Table 9.7 (page 28–29).

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 2016 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.

APPENDIX 4: THE NEFD STEERING COMMITTEE

The NEFD Steering Committee has been constituted by the New Zealand Forest Owners Association and the Ministry for Primary Industries to oversee the preparation of each edition of the National Exotic Forest Description. Members of the Steering Committee during the preparation of this report were:

MEMBER	NOMINATED BY
Ian Hinton (Chairman) Timberlands Ltd	New Zealand Forest Owners Association
Jo Drabsch Rayonier New Zealand Ltd	New Zealand Forest Owners Association
Stuart Anderson Ministry for Primary Industries	Ministry for Primary Industries
John Moore SCION	Ministry for Primary Industries
Alan Bell Alan Bell & Associates	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
Jonathan Flockton Ministry for Primary Industries	Ministry for Primary Industries
Bruce Manley School of Forestry, University of Canterbury	Ministry for Primary Industries
Peter Oliver City Forests	New Zealand Forest Owners Association
John Novis Ministry for Primary Industries	Ministry for Primary Industries
Stephen Groves Statistics New Zealand	Ministry for Primary Industries
Stephen Murray Ministry for Primary Industries	Ministry for Primary Industries

The Steering Committee's terms of reference are included in Appendix 5.

APPENDIX 5: THE NEFD STEERING COMMITTEE'S TERMS OF REFERENCE

The New Zealand Forest Owners Association and the Ministry for Primary Industries have agreed that the Steering Committee shall:

- 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 through the Director-General for Primary Industries and the Board of the New Zealand Forest Owners Association.
- 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 through the Deputy Director-General for Primary Industries to the Board of the New Zealand Forest Owners Association by 31 May of each year (Review and approval by the Director-General and the Board are required by 30 June of that year).
- 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.
- monitor user satisfaction with the NEFD outputs through the use of client surveys and through direct discussion with user representatives.
- advise the Ministry for Primary Industries Senior Management Team and the Forest Owners Association Board of any significant issues that the Steering Committee is unable to resolve.
- oversee the preparation of each edition of the National Exotic Forest Description.
- commission forecasts of future wood supply from New Zealand's planted production forests.
- ensure that all users are able to subscribe to NEFD reports on an equitable basis, with no barriers to access.
- advertise and promote the availability of NEFD reports.
- sponsor research by suitable bodies to improve the quality of NEFD information.

APPENDIX 6: REFERENCES

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

Eyre, J (1995) Predicting and Measuring New Planting from Nursery Surveys. *New Zealand Journal of Forestry*, August 1995, pp 45–46.

Manley B; Somerville O; Turbitt M; Lane P (2003) Review of New Planting Estimates. *New Zealand Journal of Forestry*, November 2003, pp 34–37.

Manley, B (2011) *2010 Deforestation Survey*. University of Canterbury. <http://www.maf.govt.nz/news-resources/publications>.

Ministry of Agriculture and Forestry (2010) *National Exotic Forest Description as at 1 April 2009*.

Ministry for Primary Industries (2011) *Annual Log and Roundwood Removal Statistics*. <http://www.mpi.govt.nz/news-resources/statistics-forecasting/forestry/annual-log-and-roundwood-removal-statistics.aspx>

Ministry of Forestry (1996) *A National Exotic Forest Description as at 1 April 1995*.

Ministry of Forestry (1996) *NEFD Regional Yield Tables as at 1 April 1995*.

New Zealand Forest Owners Association (2012) *New Zealand Forest Industry Facts & Figures 2009/2010*.

Statistics New Zealand (2009) *2007 Agricultural Production Census*. 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 7: FURTHER INFORMATION

The area data and yield tables and additional information are available from:

**Resource Information 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

An electronic copy of this report is available on the New Zealand Ministry for Primary Industries internet site: <http://www.mpi.govt.nz>. The tables from this electronic report can be downloaded directly into Microsoft Excel.

Area and yield data are available from the NEFD dataset for any combination of territorial authority area, species, silvicultural regime and age class. The Ministry for Primary Industries will provide such data on request, subject to its standard charging procedures. This information can be provided electronically or in printed form.

For reasons of confidentiality, data on the resources of individual forest growers and data at a lower level of resolution than that published in this report will not be released without the prior written consent of the forest owner(s) concerned.

The Ministry for Primary Industries welcomes any comments on the presentation of this report. These can be directed to the Information and Analysis unit, based at the Wellington address above.

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